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FOREIGN AGRICULTURE CIRCULAR

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREIGN AGRICULTURAL SERVICE
WASHINGTON, D.C.

FD 14-55 December 22, 1955

World Output of Dairy Products, Third Quarter, 1955.

Over-all factory production of dairy products decreased in the quarter ending September 30, 1955, compared with the same quarter a year earlier. Production of dried milk showed a slight increase over the preceding year, but output of butter, cheese and canned milk declined.

Conditions were favorable for milk production in Australia, where pastures benefited generally from the rains during the quarter. In New Zealand, cold, wet weather in the principal producing areas retarded pasture growth and curtailed milk production.

The decline in milk production in Denmark was due primarily to the continuous warm, dry weather which severely affected pastures in almost all parts of the country. Other contributing factors were greater marketings of cows in this period because of developing shortages of feed supplements and an unfavorable price ratio between oilcakes and dairy products. Unfavorable weather resulted in lower milk production in the Netherlands. Drought conditions midway in the quarter in Sweden, and the continued declining interest in milk production due to a continuing unfavorable price relationship with meat sharply reduced milk production.

Somewhat fewer cows in Ireland, coupled with some shortage of pasture and low prices of milk, contributed to the decreased output of milk in the third quarter. In spite of dry weather in the United Kingdom, milk production was nearly up to the 1954 level.

In Canada, milk production was affected by high temperatures early in the quarter, but it improved in September with the arrival of more favorable weather. Milk production in the United States was slightly above that of a year ago.

Factory butter production was down four percent compared with the same quarter a year ago. Output in Australia continued high, most of the increase in milk production there being utilized for the manufacture of butter.

The higher production recorded in New Zealand, compared to the same quarter of 1954, was a continuation of the trend from cheese to butter and casein.

A summary of this information was published in the December 19, 1955 issue of Foreign Crops and Markets.

FACTORY DAIRY PRODUCTS: Output in principal producing and exporting countries
3rd Quarter (calendar) 1955, with comparisons

Country and Product	Average 1934-38	Average 1946-50	Total 1954	1954 3rd Quarter	1954 4th Quarter	1955 1st Quarter	1955 2nd Quarter	1955 3rd Quarter	Third Quarter 1955/54
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	Percent
BUTTER									
Canada	1/ 254,774	277,868	314,835	118,631	55,779	34,437	106,647	116,575	98
United States	1,705,240	1,301,830	2/ 1,448,688	2/ 329,129	2/ 276,504	2/ 326,385	2/ 435,125	318,305	97
Belgium	46,179	55,353	97,779	31,612	20,020	-	-	-	-
Denmark	400,660	318,697	397,710	108,908	80,909	78,263	109,128	3/ 96,600	89
Finland	61,287	4/ 61,215	112,492	33,206	21,131	21,363	-	-	-
France 5/	529,000	390,471	551,000	-	-	-	-	-	-
Rep. of Germany	6/7/ 560,000	492,188	668,329	2/ 186,663	138,557	134,968	187,611	-	-
Ireland	89,400	68,648	2/ 88,005	38,042	14,370	3,977	27,462	3/ 35,700	94
Netherlands	201,000	155,620	2/ 179,662	57,719	42,820	25,751	2/ 56,557	3/ 44,600	77
Norway	24,930	20,049	22,882	6,887	2,840	4,651	9,751	3/ 6,600	96
Sweden	152,769	216,442	204,095	62,949	38,896	37,805	56,252	55,207	88
Switzerland 5/	57,760	36,949	8/ 65,036	16,909	10,148	11,775	17,516	-	-
United Kingdom	44,200	23,529	51,475	13,709	5,599	4,928	18,368	-	-
Argentina	65,742	100,657	114,639	3/ 22,200	3/ 15,700	40,345	29,762	3/ 20,000	90
Union of So. Africa	9/ 27,725	44,845	73,470	14,420	19,192	25,432	17,340	-	-
Australia	7/ 415,250	354,371	397,775	2/ 76,540	160,424	118,684	65,966	3/ 93,400	122
New Zealand	7/ 366,912	346,095	408,375	80,954	178,551	2/ 124,231	35,424	82,723	102
CHEESE									
Canada	1/ 119,924	114,329	84,436	34,798	14,630	6,123	26,780	30,431	87
United States	643,234	1,156,005	2/ 1,383,104	2/ 339,183	2/ 265,279	2/ 295,540	2/ 455,820	345,550	102
Denmark	68,820	123,634	2/ 191,580	51,588	33,951	37,919	63,272	3/ 55,700	108
France 10/	3/ 584,000	11/ 424,070	714,000	-	-	-	-	-	-
Italy 10/	523,513	491,326	741,848	-	-	-	-	-	-
Netherlands	3/ 200,000	176,926	2/ 326,503	100,362	87,623	51,800	2/ 119,562	3/ 79,000	79
Norway 12/	39,067	35,564	65,792	19,465	9,746	13,303	22,706	3/ 17,600	90
Sweden	76,059	115,005	121,845	37,539	19,437	21,032	2/ 41,654	35,225	94
Switzerland 12/	111,729	107,232	8/ 120,592	40,615	22,308	18,915	37,429	-	-
United Kingdom 5/	109,000	69,888	182,784	32,480	22,848	29,568	60,704	-	-
Argentina	67,873	203,830	198,414	3/ 45,200	3/ 44,000	53,130	41,888	3/ 33,400	74
Union of So.Africa	9/ 10,195	17,967	27,085	6,226	7,074	7,732	5,645	-	-
Australia	7/ 48,400	98,396	107,229	25,951	42,974	20,747	11,335	3/ 22,400	86
New Zealand	7/ 210,911	216,842	236,970	39,558	102,749	67,491	2/ 19,178	33,264	84

CANNED MILK									
Canada 13/	1/ 104,335	266,532	308,493	95,518	53,801	50,623	105,407	104,708	110
United States 14/	1,970,189	3,170,576	2/ 2,559,444	2/ 697,628	2/ 469,189	2/ 576,650	2/ 891,265	677,265	97
Cuba	15/ 32,564	36,655	56,196	20,076	17,094	-	-	-	-
Denmark	40,785	58,701	-	-	-	-	-	-	-
France	16/ 28,953	15/ 57,984	127,867	-	-	-	-	-	-
Netherlands	309,952	181,222	511,250	132,364	147,888	112,399	2/ 167,697	3/ 126,000	95
Switzerland	14,198	13,031	-	-	-	-	-	-	-
United Kingdom	378,560	219,914	258,496	55,776	53,088	2/ 69,664	159,936	-	-
Argentina	17/ 3,159	15/ 11,914	-	-	-	-	-	-	-
Australia	7/ 41,894	132,745	115,522	2/ 22,895	46,648	27,967	12,195	3/ 24,600	107
New Zealand	15/ 11,273	-	-	-	-	-	-	-	-
DRIED MILK 18/									
Canada	1/ 26,079	70,876	2/ 100,405	2/ 33,890	2/ 16,775	13,134	36,233	35,263	104
United States	15/ 203,555	913,436	2/ 1,496,248	2/ 315,044	2/ 266,980	2/ 354,900	2/ 536,875	323,970	103
Belgium	5,500	6,607	34,513	11,821	3,880	-	-	-	-
Denmark	2,205	16,866	-	-	-	-	-	-	-
France	16/ 7,685	15/ 3,308	35,274	-	-	-	-	-	-
Netherlands	56,438	54,468	130,673	54,552	14,095	10,318	2/ 61,473	3/ 46,000	84
Sweden	1,351	24,566	25,862	8,503	3,623	4,118	8,889	-	-
Switzerland	7,187	10,847	-	-	-	-	-	-	-
United Kingdom	43,098	73,848	110,432	20,832	17,248	2/ 17,248	46,592	-	-
Argentina	17/ 3,977	15/ 14,070	-	-	-	-	-	-	-
Australia	7/ 16,971	54,235	85,474	2/ 17,107	35,865	22,073	2/ 7,971	3/ 20,500	120
New Zealand	19/ 17,429	-	-	-	-	-	-	-	-

1/ Average 1935-39. 2/ Revised. 3/ Estimated. 4/ Average 1948-50. 5/ Total production. 6/ Average 1935-38. 7/ Production year ending June 30. 8/ Annual production figures more complete than monthly figures used in quarterly data. 9/ Production year ending August 31. 10/ Total cheese, and includes cheese made from the milk of sheep and goats. 11/ For 1948. 12/ Total cheese, and includes cheese made from the milk of goats. 13/ Both bulk and case goods. 14/ Evaporated whole and condensed whole case goods only. (Estimates of bulk types discontinued). 15/ Less than a 5-year average. 16/ For 1937. 17/ For 1939. 18/ Total dried whole milk and dried skim milk for human consumption. 19/ For 1938.

Foreign Agricultural Service. Prepared or estimated from official statistics, Reports of Agricultural Attaches and other U.S. Representatives Abroad and other information. (December 19, 1955).

Lower butter output reflected the decrease in milk production in the Netherlands and Sweden. With milk production down in Denmark, the quantity for manufacturing was smaller and, in addition, supplies for butter production were reduced further in favor of cheese. In Ireland, deliveries to creameries were slightly less than for the third quarter of 1954 and butter production declined.

Output in Canada was down, although production in the third month of the quarter showed a considerable gain over the same month a year earlier. Production in the United States in the third quarter also dropped below the 1954 level.

Cheese production (in factories) in the July-September period of 1955 was six percent less than that of the previous year. In Australia and New Zealand, output declined 14 percent and 16 percent, respectively. Denmark was the only country of Western Europe where factory cheese production showed an increase, - achieved at the expense of butter. In Sweden, the large output of July was offset by the sharply reduced production of the other two months of the quarter. A considerable decrease in cheese manufacture also occurred in the Netherlands and Norway.

In Canada, production was below that of a year ago, though some improvement took place toward the end of the quarter. Cheese production in the United States exceeded that of a year ago.

Canned milk (condensed and evaporated) production dropped two percent in the four countries for which estimates of third quarter production are available. Output in Australia and Canada was somewhat above that of last year. Production declined in the Netherlands and the United States.

Dried milk production estimates, as reported by four countries, increased one percent in the July-September quarter, 1955, over the corresponding period of 1954 Over-all dried milk (both whole and nonfat dry milk solids) output was higher in Australia, Canada, and the United States. Production in the Netherlands was below the 1954 level.

Current Conditions Abroad.

Australia: Prospects are excellent for milk production. Pastures are in good condition; feeds are expected to be plentiful.

New Zealand: Warm conditions proved beneficial to both stock and pastures. Production in October appears to have been well maintained in most areas.

Denmark: The dairy situation has improved since early October. A favorable price situation has encouraged farmers to maintain production at a high level. Rains also helped pastures and grazing.

Switzerland: Weather conditions are excellent for grazing and winter reserves of feed are large.

Canada: Dairy production is being maintained at a high level.

43
7
2

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UNITED STATES DEPARTMENT OF AGRICULTURE
FOREIGN AGRICULTURAL SERVICE
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FD 13-55 October 26, 1955

1955 WORLD MILK PRODUCTION ESTIMATES

World milk production during 1955 will be down about 1 percent under 1954 according to reports from 22 of the principal dairy countries of the world. The 22 nations, which account for about 60 percent of the world's milk supply, are expected to show a decline of about 4 billion pounds from the 374.5 billion pounds of milk reported in 1954.

Adverse weather conditions in most of Europe is primarily responsible for the abrupt check to the pattern of increased milk production registered in the principal dairy countries during the past several years. Without exception European countries report that drought conditions have cut severely into their milk production potentials and, as a result of the general decline, European production will probably be more than 2 percent under last year. Only Greece, of the European nations from which reports are received, will show an increase in production; the 600 million pounds estimated production for Greece in 1955 represents just over 2 percent increase. Much of the increase in Greece is attributed to a reported rise of 4 percent in milk cow numbers during the year.

Milk cow numbers in Europe are generally down. This is attributed in large part to lack of adequate feed and forage. In Ireland, for example, the unsatisfactory pasture conditions during the second quarter of the year resulted in the sale of a large number of the older cows for beef on the British market where prices were attractive.

Despite the decline in 1955, output in Europe will remain about the level of 1953 which was, in all respects, a good year for dairying. For the 22 countries as a whole, 1955 will show milk production about one percent greater than for 1953.

In the Western Hemisphere three of the five countries show slight increases. Milk output in Canada and the United States will be only slightly above 1954, but Mexico's milk production is expected to be 2 percent greater than last year's. Cuba shows the largest decline of all countries reporting. The 1.3 billion pounds estimated production for 1955 represents only 81 percent of 1954 production. The situation in Cuba is due entirely to the protracted droughts experienced since November 1954. The recent winter season in Argentina has contributed to the declining output there. While the dairy regions went into the third quarter of 1955

This is one of a series of regularly schedule reports on world agricultural production approved by the Foreign Agricultural Service Committee on Foreign Crops and Livestock Statistics. It is based in part upon reports of Agricultural Attaches and other U.S. representatives abroad.

with excellent prospects for winter grazing, long, dry spells have materially cut production, particularly in the dairy zones. Some rains have occurred during the past month but considerably more is needed in most of the dairy sections for the spring grass crops.

The situation in Australia and New Zealand presents the only sustained increase in the dairy picture. Production in these countries during 1955 is almost 3.6 percent greater than 1954. The increase in Australia alone is 5 percent and comes on top of an increase of over 8 percent of 1954 over 1953. The 2 percent increase registered by New Zealand is not sufficient, however, to overcome the 5 percent decline registered from milk production in 1954 and milk production during 1955 is still somewhat below 1953, a banner year in milk production in New Zealand.

MILK: 1/ ESTIMATE OF 1955 PRODUCTION IN SPECIFIED COUNTRIES,
WITH COMPARISONS

Countries	Average 1934-38	Average 1946-50	1953	Annual 1954	1955 2/
	Million Pounds	Million Pounds	Million Pounds	Million Pounds	Million Pounds
Canada	3/ 15,284	16,844	16,449	16,884	16,950
Mexico	4/ 3,000	3,086	3,814	3,882	3,950
United States	104,930	117,297	121,449	123,702	124,000
Cuba	3/ 1,010	1,122	1,376	1,600	1,300
Austria	5/ 5,602	3,726	5,344	5,401	5,400
Belgium	6,790	6,219	7,836	8,054	7,800
Denmark	6/7/ 11,684	10,181	11,856	11,898	11,400
Finland	5,587	4,149	6,283	6,495	6,300
France	33,000	27,256	38,590	41,660	41,500
Germany,Republic of	7/8/ 33,069	9/ 24,993	36,852	37,597	36,850
Greece	6/ 251	10/ 269	416	587	600
Ireland	5,090	4,800	5,320	5,408	4,500
Italy 11/	12/ 13,750	13/ 16,746	18,001	18,523	18,150
Luxembourg	318	9/ 346	387	401	390
Netherlands	11,180	10,109	12,837	12,967	12,710
Norway	6/7/ 2,954	3,116	3,544	3,453	3,450
Sweden	6/7/ 10,238	10,245	10,097	10,252	9,760
Switzerland	5,680	4,951	5,937	6,157	6,100
United Kingdom	18,424	20,394	23,752	24,195	23,700
Argentina 14/	12/ 6,826	9/ 7,762	11,804	11,236	10,800
Australia 14/	5/ 11,780	12,206	12,195	13,184	13,850
New Zealand 7/	10,176	9,487	11,740	10,998	11,200

1/ Cows' milk. 2/ Preliminary. 3/ Average 1935-39. 4/ For 1940. 5/ For 1934. 6/ Average 1933-37. 7/ Years ending June 30. 8/ Average 1935-38. 9/ Average 1948-50. 10/ Average 1947-50. 11/ Includes cow, sheep and goat milk. 12/ For 1938. 13/ For 1950. 14/ Excludes milk fed to calves.

Foreign Agricultural Service. Prepared or estimated from official statistics, Reports of Agricultural Attaches and other U.S. Representatives abroad, and other information. - October 24, 1955.

43
17
p.2

FOREIGN AGRICULTURE CIRCULAR

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREIGN AGRICULTURAL SERVICE
WASHINGTON, D.C.

FD 12-55

October 17, 1955

WORLD OUTPUT OF DAIRY PRODUCTS, SECOND QUARTER, 1955

Factory production of cheese and canned milk was up, but production of butter and dried milk was down in the major producing countries in the second quarter of 1955, compared with the same quarter of 1954.

Milk production in many western European countries was hampered by weather in this quarter. Poor pasture conditions in Denmark contributed to lower yields and this, together with smaller cow numbers, reduced milk production in the second quarter below the level of a year ago. In Sweden, a shortage of feed and a decline in cow numbers resulted in lower milk production in the second quarter. Production also was down in Switzerland because of a sharp drop in the number of cows.

Conditions were favorable for milk production in Australia in the second quarter, but in New Zealand, droughts in important producing areas and the consequent shortage of feed greatly curtailed production.

Favorable weather in Canada brought along pastures earlier than usual and milk production increased. In the United States, with temperatures moderate and ample green feed in pastures throughout most of the quarter, milk production was maintained at approximately the 1954 level.

Butter production in factories in the second quarter of 1955 declined 4 percent below comparable 1954. In Denmark, smaller butter output reflected the lower milk production, together with an improvement in prices for cheese over butter. Deliveries were down in Sweden and Ireland and butter production dropped sharply. In the Netherlands, milk for butter was secondary to that for other dairy products. While deliveries were down in Switzerland, utilization also differed, in that butter production decreased in this period while cheese production increased. Norway reported a higher quantity of butter manufactured in the second quarter.

In Australia, the increase in milk production was used wholly for butter. Output in New Zealand declined.

Butter production showed an increase in Canada, but a decrease in the United States.

FACTORY DAIRY PRODUCTS: Output in principal producing and exporting countries, 2nd quarter (calendar) 1955, with comparisons

Country and Product	Average 1934-38	Average 1946-50	Total 1954	1954 2nd Quarter	1954 3rd Quarter	1954 4th Quarter	1955 1st Quarter	1955 2nd Quarter	2nd Quarter 1955/1954
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	Percent
BUTTER									
Canada	1/ 254,774	277,868	2/ 314,835	2/ 104,832	2/ 118,631	2/ 55,779	2/ 34,437	106,647	102
United States	1,705,240	1,301,830	1,449,180	467,330	331,640	271,635	328,030	437,875	94
Belgium	46,179	55,353	97,779	29,209	31,612	20,020	-	-	-
Denmark	400,660	318,697	397,710	120,150	108,908	80,909	78,263	109,128	91
Finland	61,287	3/ 61,215	2/ 112,492	34,731	33,206	2/ 21,131	21,363	-	-
France 4/	529,000	390,471	5/ 650,000	-	-	-	-	-	-
Rep. of Germany	6/7/ 560,000	3/ 492,188	668,329	194,492	186,664	138,557	2/ 134,968	-	-
Ireland	89,400	68,648	2/ 88,002	30,707	38,042	14,370	3,977	27,462	89
Netherlands	201,000	155,620	2/ 183,015	52,714	57,719	2/ 42,820	25,751	5/ 47,800	91
Norway	24,930	20,049	2/ 22,882	9,002	6,887	2/ 2,840	4,651	9,751	108
Sweden	152,769	216,442	204,095	60,942	62,949	38,896	37,805	5/ 56,000	92
Switzerland 4/	57,760	36,949	8/ 65,036	2/ 20,203	16,909	10,148	11,775	17,516	87
United Kingdom	44,200	23,529	2/ 51,475	21,191	13,709	5,599	4,928	-	-
Argentina	65,742	100,657	114,639	-	-	-	-	-	-
Union of So. Africa	9/ 27,725	44,845	2/ 73,470	16,447	14,420	2/ 19,192	-	-	-
Australia	7/ 415,250	354,371	2/ 397,775	2/ 53,503	76,474	160,424	118,684	65,966	123
New Zealand	7/ 366,912	346,095	2/ 408,375	2/ 37,116	80,954	178,551	2/ 123,962	5/ 35,400	95
CHEESE									
Canada	1/ 119,924	114,329	84,436	27,968	34,798	14,630	6,123	26,780	96
United States	643,234	1,156,005	1,353,500	445,340	328,570	257,590	294,635	445,370	100
Denmark	68,820	123,634	179,235	59,524	51,588	33,951	37,919	63,272	106
France 10/	5/ 584,000	11/ 424,070	5/ 730,000	-	-	-	-	-	-
Italy 10/	523,513	491,326	741,848	-	-	-	-	-	-
Netherlands	5/ 200,000	176,926	2/ 332,585	94,514	100,362	2/ 87,623	51,800	5/ 104,000	110
Norway 12/	39,067	35,564	65,792	23,665	19,465	9,746	13,303	22,706	96
Sweden	76,059	115,005	121,845	41,469	37,539	19,437	21,032	5/ 41,600	100
Switzerland 12/	111,729	107,232	8/ 120,592	2/ 33,005	40,615	22,308	18,915	37,429	113
United Kingdom 4/	109,000	69,888	2/ 182,784	72,128	32,480	2/ 22,848	29,568	-	-
Argentina	67,873	203,830	198,414	-	-	-	-	-	-
Union of So. Africa	9/ 10,195	17,967	2/ 27,085	2/ 5,794	2/ 6,226	2/ 7,074	-	-	-
Australia	7/ 48,400	98,396	2/ 107,229	2/ 11,870	25,951	42,974	20,747	11,335	96
New Zealand	7/ 210,911	216,842	236,970	22,938	39,558	102,749	2/ 67,491	5/ 19,200	84

CANNED MILK									
Canada 13/	1/ 104,335	266,532	2/ 308,493	2/ 110,310	95,518	53,801	50,623	105,407	96
United States 14/	1,970,189	3,170,576	2,564,210	872,770	698,950	470,265	576,900	892,515	102
Cuba	15/ 32,564	36,655	56,196	-	-	-	-	-	-
Denmark	40,785	58,701	-	-	-	-	-	-	-
France	16/ 28,953	15/ 57,984	127,867	-	-	-	-	-	-
Netherlands	309,952	181,222	511,250	133,211	132,364	147,888	112,399	5/ 151,000	113
Switzerland	14,198	13,031	-	-	-	-	-	-	-
United Kingdom	378,560	219,914	258,496	133,056	55,776	53,088	69,216	-	-
Argentina	17/ 3,159	15/ 11,914	-	-	-	-	-	-	-
Australia	7/ 41,894	132,745	115,522	14,988	22,301	46,648	2/ 27,967	12,195	81
New Zealand	15/ 11,273	-	-	-	-	-	-	-	-
DRIED MILK 18/									
Canada	1/ 26,079	70,876	2/ 100,388	3/ 35,017	33,887	16,761	13,134	36,233	103
United States	15/ 203,555	913,436	1,379,025	492,335	284,230	236,240	319,600	485,975	99
Belgium	5,500	6,607	34,513	14,046	11,821	3,880	-	-	-
Denmark	2,205	16,866	-	-	-	-	-	-	-
France	16/ 7,685	15/ 3,308	35,274	-	-	-	-	-	-
Netherlands	56,438	54,468	130,673	49,041	54,552	14,095	10,318	5/ 50,600	103
Sweden	1,351	24,566	25,862	9,665	8,503	3,623	4,118	-	-
Switzerland	7,187	10,847	-	-	-	-	-	-	-
United Kingdom	43,098	73,848	110,432	47,712	20,832	17,248	17,024	-	-
Argentina	17/ 3,977	15/ 14,070	-	-	-	-	-	-	-
Australia	7/ 16,971	54,235	2/ 85,474	2/ 8,659	17,109	35,865	2/ 22,073	7,970	92
New Zealand	19/ 17,429	-	-	-	-	-	-	-	-

1/ Average 1935-39. 2/ Revised. 3/ Average 1948-50. 4/ Total production. 5/ Estimated. 6/ Average 1935-38. 7/ Production year ending June 30. 8/ Annual production figures more complete than monthly figures used in quarterly data. 9/ Production year ending August 31. 10/ Total cheese, and includes cheese made from the milk of sheep and goats. 11/ For 1948. 12/ Total cheese, and includes cheese made from the milk of goats. 13/ Both bulk and case goods. 14/ Evaporated whole and condensed whole case goods only. (Estimates of production of bulk types discontinued). 15/ Less than a 5-year average. 16/ For 1937. 17/ For 1939. 18/ Total dried whole milk and dried skim milk for human consumption. 19/ For 1938.

Foreign Agricultural Service. Prepared or estimated from official statistics, reports of Agricultural Attaches and other U.S. Representatives abroad and other information. October 10, 1955.

Factory production of cheese in the second quarter was about two percent higher than a year earlier. Output in Switzerland increased substantially as a result of the continued shift away from butter production. In the Netherlands, more milk was available for cheese. Cheese prices in Denmark improved over butter prices, resulting in an increase in cheese production. Output was up in Sweden, but down in Norway.

Cheese production declined in both Austalia and New Zealand in the second quarter.

In Canada, output dropped sharply, while in the United States, very little change was noted, compared with a year ago.

Over-all canned milk production increased three percent in the April-June quarter of this year. Output was up in the Netherlands and the United States, but down in Australia and Canada.

Dried milk production in the second quarter of 1955 dropped just below the level of comparable 1954. A decline in output of nonfat dry milk solids in each of the four countries reporting accounted for this decrease.

Current Conditions Abroad.

Belgium: - Declining dairy production was checked somewhat by the recent improvement in weather conditions.

Denmark: - Prospects for the latter half of the year are not encouraging. The drought which prevailed over the entire country throughout the late summer greatly reduced pastures.

Ireland: - While weather conditions are good, dairy production has declined because of the sale of cows, encouraged by heavy demand and high prices.

Sweden: - The output of milk and dairy products has been affected by the summer drought and by the current high rate of slaughter due to a declining interest in milk production owing to relatively unfavorable prices and better income opportunities for marketable crops.

Switzerland: - Feed conditions are very good and per cow yields show an upward trend.

Australia: - Seasonal conditions in all States are satisfactory and prospects for the new season are favorable. Stock is reported to be in fair to good condition except in some isolated areas.

New Zealand:- The feed position is causing concern in some areas due to cold wet weather which has retarded growth.

Canada: - Although the drought was broken in late summer, its consequences will affect milk production for some time to come.

A summary of this information was published in the October 10, 1955 issue of Foreign Crops and Markets.

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PER CAPITA CONSUMPTION OF DAIRY PRODUCTS IN 1954

SUMMARY

For the second consecutive year the per capita consumption of milk and dairy products showed an increase on a whole milk equivalent basis. Of the 15 reporting countries 9 showed increases in consumption in 1954 while 6 reported declines in per capita use from 1953.

As was also the case last year, the increase registered was due primarily to a gain in butter consumption, although some small gains were also made in fluid milk and cheese consumption. Canned milk use dropped slightly while whole milk consumption remained about the same as 1953.

On the country product basis, Ireland was still the leading consumer of dairy products with a whole milk equivalent consumption rate per capita of 1,425 pounds. New Zealand, the pre-war leader, remained in second place. The United States remained in 13th place although showing a slight gain from 1953.

New Zealand was also the leading consumer of fluid milk and butter during 1954; 527 pounds of milk were consumed in fluid form per capita during the year while butter consumption amounted to 44.6 pounds per person. The United States was only 6th in fluid milk consumption at 395 pounds per capita, 2 pounds under 1953 use, and 13th in butter consumption at 9.0 pounds per capita.

In cheese consumption the United States was 11th at 7.6 pounds per capita while Norway was 1 with 19.0 pounds consumed per person during 1954.

Only in the processed milk items was the United States among the leaders in per capita consumption. The United States was first in canned milk use of 21.6 pounds in 1954; in the consumption of dried milk it ranked 4th at 4.4 pounds per capita compared to 6.0 pounds by the Netherlands.

By Terrence W. McCabe and Regina Murray - based in part on Foreign Service Reports.

For the second consecutive year the per capita consumption of milk and dairy products in 15 primary dairy countries showed an overall increase. In 1954 consumption of dairy products in terms of whole milk equivalent in Belgium, Denmark, France, The Federal Republic of Germany, Ireland, Italy, The Netherlands, Norway, Sweden, Switzerland, United Kingdom, Australia, New Zealand, Canada and the United States amounted to 718 pounds per person, an increase of 9 pounds over 1953.

Milk production also showed an increase. Total production of milk for the 15 countries in 1954 was reported at just over 345 billion pounds, or an average of 817 pounds per person; this represents an increase of 10 pounds over the previous year. Since consumption in the 15 countries rose 9 pounds per person during the year, 90 percent of the increased production went into consumption. This is considerably different from the situation between 1952 and 1953 when consumption took less than 30 percent of the 35 pound increase in milk production per person in the same 15 countries.

The gain in consumption is due primarily to an overall increase in butter use. Use of cheese was up slightly, but the increase in whole milk equivalent was offset by a drop in the use of canned milk products. The total increased consumption of fluid milk in the 15 countries was small, amounting to slightly more than 0.1 pound per person.

Statistical Note: It has been learned that the data in the previous issue of this series on per capita consumption have been used to make absolute comparisons between countries on a whole milk equivalent basis. The data are, on the contrary, subject only to relative comparisons since in all cases, except imports for consumption, the data are for country products and the whole milk equivalents are expressed in terms of the various countries' milks. Since the composition quality of milk varies from country to country, comparisons on a whole milk basis can only be relative.

For example, it took almost 25 pounds of Irish milk to make one pound of butter, so the manufacture of the 40.6 pounds of butter consumed per person in Ireland in 1954 required more than 1,000 pounds of milk. In New Zealand, where the average butterfat content of milk was reported at 4.55 percent, it took just over 800 pounds to produce the 44.6 pounds of butter reported used per person in that country.

In addition, some countries standardize their fluid milk at legal fat limits, some as low as the 2.5 percent of the Netherlands, and data were reported on a standardized basis. In other countries fluid consumption was reported in terms of milk at the pail.

In order to make possible absolute comparisons, a butterfat content basis was selected. It was further decided to standardize the data on the basis of United States milk, which, in 1954, was reported to have an average fat content of 3.87 percent. Comparisons on this basis will be made following the presentation of the country product information.

Terrence W. McCabe, Agricultural Economist.

Both production and consumption were still below prewar. Prewar weighted per capita production and consumption figures were 832 and 768 pounds respectively. Production in 1954 was thus 17 pounds per person under the prewar years while consumption, on a whole milk equivalent basis, was 50 pounds per person under that for prewar years.

Belgium and the United Kingdom remained the only net importers of dairy products. The United Kingdom production was 264 pounds under per capita consumption as compared with 263 pounds difference in 1953. Belgium, on the other hand, reduced the spread between consumption and production; in 1953 it was necessary to import an additional 65 pounds, whole milk equivalent, to meet consumption demands, but in 1954 only 21 pounds were required to bridge the gap.

The tabular comparison of milk production and consumption of milk and dairy products in the prewar period, 1953 and 1954 for the 15 countries appears in the Appendix.

In spite of a decreased intake in 1954, Ireland was again the leading consumer of dairy products in terms of whole milk equivalent with a reported 1,425 pounds consumed per person; as was the case in 1953, the consumption figure did not include canned and dried milk products, information on disappearance not being available.

New Zealand retained its second place rank with a per capita consumption rate of 1,410 pounds of whole milk equivalent during 1954. This is 3 pounds above the 1953 figure. Although 44 pounds under its 1953 figure, Sweden stayed in 3rd place with a consumption rate of 1,173 pounds per person during 1954.

An increase in consumption of 62 pounds per person over 1953 vaulted Australia into 4th place at 1,096 pounds. Australia's advance was made at the expense of Canada which, at 1,027 pounds, consumed 7 pounds, whole milk equivalent, less per person than in the previous year. Norway and Belgium exchanged 7th and 8th places.

The remaining 8 countries all retained their 1953 rank. Switzerland, consuming 994 pounds of milk per person, was in 6th place while Italy again was low-ranking consumer at 297 pounds per person during 1954, more than 300 pounds below the Netherlands.

The United States again was 13th on the list. The gain in consumption of 8 pounds per person between 1953 and 1954 raised the United States to 696 pounds, well below the 729 pounds milk equivalent of dairy products consumed in the Federal Republic of Germany, but substantially greater than the 616 pounds registered by 14th ranking Netherlands.

Since the war Ireland has been the largest gainer in per capita consumption of dairy products on a whole milk equivalent basis. The 1,425 pounds now consumed per person in Ireland represents a gain of 273 pounds over prewar. Belgium, 13th ranking country in the prewar period, has added 157 pounds per person to its consumption, the second largest gain. France and Australia both showed gains of 120 pounds of whole milk equivalent consumption per person over the prewar period. New Zealand's increase in per capita consumption of 103 pounds was not sufficient to allow it to retain its number 1 rank of prewar.

Eight of the 15 countries recorded losses in per capita consumption of milk and dairy products, whole milk equivalent, from the prewar period. Canada was the largest loser, dropping 196 pounds per person. The Netherlands at 193 pounds and the United Kingdom at 188 pounds per person showed the next largest losses. Whole milk equivalent consumption of dairy products in the United States has dropped 95 pounds from the 1935-39 average of 791 pounds per person annually.

The rank orders of countries in the per capita consumption of milk and dairy products on a whole milk equivalent basis during prewar, 1953 and 1954 are shown in Table 1.

Table 1

Per Capita Consumption of Milk and Dairy Products
in terms of Whole Milk Equivalent in 15 Countries
Prewar, 1953 and 1954

	Prewar		1953		1954	
Rank	Country	Per Capita Consumption	Country	Per Capita Consumption	Country	Per Capita Consumption
		Pounds		Pounds		Pounds
1.	New Zealand	1,307	Ireland	1,439	Ireland	1,425
2.	Sweden	1,256	New Zealand	1,407	New Zealand	1,410
3.	Canada	1,223	Sweden	1,217	Sweden	1,173
4.	Ireland	1,152	Canada	1,035	Australia	1,096
5.	Switzerland	1,025	Australia	1,034	Canada	1,027
6.	Australia	976	Switzerland	968	Switzerland	994
7.	United Kingdom	970	Belgium	958	Belgium	952
8.	Norway	924	Norway	919	Norway	934
9.	Denmark	897	Denmark	862	Denmark	857
10.	Netherlands	809	United Kingdom	730	France	751
11.	German Rep.	805	France	729	United Kingdom	738
12.	United States	791	German Rep.	701	German Rep.	729
13.	Belgium	777	United States	688	United States	696
14.	France	631	Netherlands	600	Netherlands	616
15.	Italy	225	Italy	300	Italy	297

Only 5 countries showed increases in the per capita consumption of fluid milk between 1953 and 1954 while the other 10 all showed declines in fluid milk use.

New Zealand, in spite of the drop of 3 pounds per person during the year, was still the number 1 fluid milk consumer. About one-tenth of the record milk production of that country found its way into domestic fluid milk consumption channels and the 527 pounds per person consumed during 1954 in New Zealand was 17 pounds greater than that reported for 2nd ranking Norway.

There was no change in the rank order of countries between 1953 and 1954; the gains and losses during the year were not of sufficient magnitude to alter the array. The largest gain was made by Belgium with an increase in fluid consumption of 8 pounds per person to 214 pounds; Belgium was still no better than 13th ranking in spite of the gain. Efforts of the French Government to increase the use of fluid milk in that country had some success and France reported a gain of 4 pounds per person over the 1953 figure of 202 pounds per capita.

The data for Australia and the Netherlands both show increased fluid milk consumption of 2 pounds per person during 1954. Norway, second ranking country in fluid use, showed a gain of 1 pound per person to 510 pounds.

The largest loss in fluid milk use was reported from Denmark where 7 pounds per person less milk was consumed than in 1953. Ireland, which in spite of its lofty rating on the basis of all dairy products ranked only 8th in fluid use, dropped 6 pounds during the year to 351 pounds per person. The Federal Republic of Germany, at 257 pounds of fluid milk, consumed 6 pounds per person less than in 1953.

Canada and the United States, ranking 5th and 6th respectively in fluid milk consumption, both showed declines of 2 pounds per person from 1953 use.

Since the prewar period, however, the use of fluid milk has showed a substantial rise. Twelve of the 15 countries showed increased use of fluid milk while only 3 reported declines. Sweden, top-ranking fluid milk consumer before World War II at 521 pounds per person annually, was one of those showing a loss; the 26 pounds per person loss suffered by Sweden dropped it to 3rd place in rank in 1954. Per capita consumption of fluid milk dropped 41 pounds in Switzerland between the 1934-38 period and 1954 and, as a result, Switzerland fell from second ranking country in prewar to 4th rank during 1954.

Of the 12 countries showing gains in fluid milk consumption over prewar, Norway registered the largest increase, 123 pounds per person. However, the gain, outstanding as it is, was not sufficient to raise Norway beyond 2nd place in 1954. New Zealand's gain of 90 pounds per person since the war was sufficient to give it top rank with both Sweden and Switzerland showing their declines.

The United Kingdom also showed a much greater intake of fluid milk from prewar, raising its per person intake 106 pounds from 234 pounds in 1934-38 to 340 pounds per person in 1954. This large increase could raise the United Kingdom only from 12th ranking in the prewar period to 9th in 1954.

The United States reported fluid milk consumption of 395 pounds per person during 1954, an increase of 40 pounds from prewar; this was sufficient to raise the rank of the United States from 7th in prewar to 6th in 1954. Canada, 4th ranking country before World War II dropped to 5th place in 1954 despite its gain of 11 pounds in consumption per person.

The ranks of the 15 countries in fluid milk consumption per person in the prewar period, 1953 and 1954 are shown in Table 2.

Table 2

Per Capita Consumption of Fluid Milk in 15 Countries
Prewar - 1953-54

	Prewar		1953		1954	
Rank	Country	Per Capita Consumption Pounds	Country	Per Capita Consumption Pounds	Country	Per Capita Consumption Pounds
1.	Sweden	521	New Zealand	530	New Zealand	527
2.	Switzerland	511	Norway	509	Norway	510
3.	New Zealand	437	Sweden	496	Sweden	495
4.	Canada	426	Switzerland	474	Switzerland	470
5.	Norway	387	Canada	439	Canada	437
6.	Denmark	369	United States	397	United States	395
7.	United States	355	Denmark	386	Denmark	379
8.	Ireland	324	Ireland	357	Ireland	351
9.	German Rep.	307	United Kingdom	342	United Kingdom	340
10.	Netherlands	272	Australia	304	Australia	306
11.	Australia	234	Netherlands	285	Netherlands	287
12.	United Kingdom	234	German Rep.	263	German Rep.	257
13.	France	190	Belgium	206	Belgium	214
14.	Belgium	173	France	198	France	202
15.	Italy	80	Italy	112	Italy	110

New Zealand is also the number 1 butter consumer, a position it also held in 1953. Per capita consumption of 44.6 pounds during 1954 is a gain of 0.6 pounds and an increase of 4.0 pounds from prewar.

Ireland also retained its 2nd rank in butter use although per capita consumption dropped off 0.5 pounds in 1954. Ireland owed its rank as top consumer of dairy products on a whole milk equivalent basis to its use of butter made from a milk of a reported comparatively low average fat content.

While 9 countries reported increases in per capita consumption of butter and 5 registered losses between 1953 and 1954, there was only one change in the numerical ranking of countries. The Federal Republic of Germany increased its use of butter in 1954 by 1.2 pounds per person, allowing it to take over 8th place from France which remained stationary at 15 pounds per person.

The largest increase in butter use was in Australia where butter consumption in 1954 at 32.6 pounds per person was 2.2 pounds more than in 1953. Fourth-ranked Sweden suffered the largest loss, dropping 1.8 pounds to 24.8 pounds per capita. The 1.2 pound per person decrease in butter use in the United Kingdom was attributed to the temporary increased use of other fats with the end of rationing in that country.

The United States increased its per capita use of butter 0.5 pounds to 9.0 pounds annually in 1954. This is the first increase recorded in butter consumption in the United States since 1950 showed a 0.2 pounds per person increase over 1949 use. Neighboring Canada showed a decline of 0.2 pounds per person, but, at 20.7 pounds, per capita consumption in 6th ranked Canada was still substantially greater than in the United States.

Since the prewar period 8 of the countries have shown losses in per capita butter consumption and only 7 have recorded increases. The present first 5 ranking countries showed substantial increases in consumption since prewar days. New Zealand increased consumption 4.0 pounds, Ireland registered a 7.2 pounds per person increase and Australia 1.2 pounds per person; all three countries have maintained their prewar rank of 1, 2 and 3. Sweden's and Belgium's gains of 2.7 and 3.5 pounds per person respectively over the prewar period accounted for their rise in rank from 6th and 7th to 4th and 5th respectively.

The only other country showing an increase from 1934-38 was France. The increase of 2.3 pounds to 15.0 pounds per person in butter consumption raised France from 14th to 9th place.

Of the countries losing ground in butter consumption since the war the largest loss was registered by the United Kingdom where consumption decreased 11.0 pounds to 13.8 pounds per person; the loss dropped the United Kingdom from 5th ranking consumer to 11th place in 1954. Canada's loss in consumption since World War II was almost as large and the 10.3 pounds per person decline in butter use pushed Canada from 4th to 6th rank. The Netherlands consumed 15.2 pounds of butter per person during prewar, but 1954 consumption of 6.7 pounds is a loss of 8.5 pounds.

The United States ranked 10th in butter use in the 1934-38 period with 16.9 pounds consumed annually per person. Consumption loss since that time amounted to 7.9 pounds and dropped the United States to 13th rank in 1954.

The ranks of the 15 countries in per capita butter consumption in the prewar period, 1953 and 1954 are shown in Table 3.

Table 3

Per capita Consumption of Butter in 15 Countries
Prewar - 1953-54

	Prewar		1953		1954	
Rank	Country	Per Capita Consumption Pounds	Country	Per Capita Consumption Pounds	Country	Per Capita Consumption Pounds
1.	New Zealand	40.6	New Zealand	44.0	New Zealand	44.6
2.	Ireland	33.4	Ireland	41.1	Ireland	40.6
3.	Australia	31.4	Australia	30.4	Australia	32.6
4.	Canada	31.0	Sweden	26.6	Sweden	24.8
5.	United Kingdom	24.8	Belgium	25.3	Belgium	24.1
6.	Sweden	22.1	Canada	20.9	Canada	20.7
7.	Belgium	20.6	Denmark	18.5	Denmark	19.0
8.	Denmark	19.5	France	15.0	German Rep.	15.2
9.	German Rep.	18.0	Greman Rep.	14.0	France	15.0
10.	United States	16.9	Switzerland	13.2	Switzerland	14.0
11.	Netherlands	15.2	United Kingdom	13.1	United Kingdom	13.8
12.	Norway	15.2	Norway	8.6	Norway	9.4
13.	Switzerland	14.3	United States	8.5	United States	9.0
14.	France	12.7	Netherlands	6.0	Netherlands	6.7
15.	Italy	2.6	Italy	3.2	Italy	3.0

While 12 countries showed increases in per capita consumption of cheese and only 3 registered losses in use, the over-all increase for the 15 countries was less than one-half pound.

Norway, top consumer of cheese in 1953, increased its per capita consumption another 1.4 pounds during the year and the 19.0 pounds used per person assured Norway continuation in the top place. However, the largest gain was made by France which increased its intake of cheese by 1.9 pounds per person and the 16.4 pounds consumed during 1954 was sufficient to vault France to 4th place over Italy and the Netherlands. Sweden and Switzerland, ranked 2nd and 3rd in 1953, retained their numerical ratings. Both countries gained 0.6 pounds in per capita consumption during the year and in 1954 Switzerland showed a per person use of 17.6 pounds and Sweden 16.8 pounds.

In addition to France's rise in rank, there was only one other change from 1953; the United Kingdom and the Federal Republic of Germany exchanged 9th and 10th places. Although both production and imports of cheese by the United Kingdom were not much over 90 percent of 1953, sufficient stocks were on hand to permit consumption to increase 0.4 pounds per person in 1954 to 9.7 pounds. Since the Federal Republic consumption dropped to 9.3 pounds the United Kingdom was assured 9th place.

There were no other changes between 1953 and 1954 in the numerical ratings. Ireland, in spite of a gain of 0.7 pounds per person in 1954, still ranked last in per capita consumption of cheese. The United States showed a small gain of 0.2 pounds, but the per person consumption of 7.6 pounds was sufficient only for 11th place, the same as 1953.

Since the war only 3 countries have failed to show gains in cheese consumption and in one of these, Switzerland, the per capita consumption in 1954 reached the prewar level of 17.6 pounds. However, this was not sufficient to hold the 1st place which Switzerland held before World War II; Norway, 2nd ranking country in prewar, took over 1st place with a 3.1 pound per person gain.

The largest gain since the war was registered by Italy with 4.3 pounds increased consumption per person. Other large increases were 2.7 and 2.5 pounds registered by Sweden and Canada respectively. The United States gained 2.3 pounds since the war.

The numberical order of the countries on the basis of per capita consumption of cheese during the prewar period, 1953 and 1954 are shown in Table 4.

Table 4

Per Capita Consumption of Cheese in 15 Countries
Prewar - 1953-54

Rank	Prewar		1953		1954	
	Country	Per Capita Consumption Pounds	Country	Per Capita Consumption Pounds	Country	Per Capita Consumption Pounds
1.	Switzerland	17.6	Norway	17.6	Norway	19.0
2.	Norway	16.9	Switzerland	17.0	Switzerland	17.6
3.	Netherlands	16.0	Sweden	16.2	Sweden	16.8
4.	France	14.3	Italy	15.4	France	16.4
5.	Sweden	14.1	Netherlands	15.3	Italy	15.6
6.	Denmark	12.2	France	14.5	Netherlands	15.0
7.	Italy	11.3	Denmark	11.0	Denmark	11.5
8.	United Kingdom	8.8	Belgium	10.5	Belgium	10.8
9.	Belgium	8.2	German Rep.	9.5	United Kingdom	9.7
10.	German Rep.	7.7	United Kingdom	9.3	German Rep.	9.3
11.	United States	5.3	United States	7.4	United States	7.6
12.	New Zealand	5.0	Canada	6.2	Canada	6.3
13.	Australia	3.9	New Zealand	6.0	New Zealand	5.8
14.	Canada	3.8	Australia	5.1	Australia	5.6
15.	Ireland	0.7	Ireland	2.0	Ireland	2.7

In 1954 canned milk consumption showed increases in 5 and decreases in 6 countries; Italy showed no change in per capita intake of canned milk from 1953.

The United States, top ranking consumer of canned milk products since prewar, maintained its first ranking in spite of a loss of 0.7 pounds per person from 1953 to 21.6 pounds. Canada is a close second, although it too showed a fractional decline to 20.1 pounds per person.

After the United States and Canada canned milk consumption shows a large drop to the 3rd ranking country. Australia took over 3rd place with an increase of 0.7 pounds, but its 7.7 pounds per capita consumption in 1954 was less than 40 percent of that of the United States or Canada.

Other increases during 1954 in canned milk products consumption were recorded by the Federal Republic of Germany, up 0.4 pounds to 7.6 pounds per person, Norway, 0.3 pounds more to 4.4 pounds and the Netherlands, up 0.9 pounds to 3.6 pounds per person. Sweden more than doubled its use of canned milk but the increase of 0.5 pounds raised per capita consumption in that country to only 0.8 pounds annually.

The largest loss was recorded by the United Kingdom which dropped from 3rd place in 1953 to 7th place in 1954 through the loss of 3.2 pounds per capita to 4.2 pounds. In addition, the United Kingdom showed the largest loss from prewar. In 1934-38 the per capita consumption of canned milk was 11.4 pounds per person, sufficient to give the United Kingdom 2nd rank. More than five-eighths of this consumption was lost by 1954.

Only one other country, Sweden, showed a decline from prewar. All other countries for which comparable data are available showed gains. Canada has almost tripled its consumption since prewar by the addition of 13.0 pounds of canned milk per capita. The Federal Republic of Germany and the Netherlands also tripled their intake while Australia's 1954 per capita consumption was almost double prewar.

There are so few producers of canned and dried milk products in several countries, New Zealand, for example, that the Statistical Offices of these countries do not publish production figures so as not to reveal, possibly, individual plant activity. As a result, there were no data available on the product consumption of canned and dried milk in these countries. However, information was available on the amount of milk utilized in the manufacture of these items and the figures on whole milk equivalent consumption per capita include whole milk consumed in these products.

The rank orders of the countries in per capita consumption of canned milk products in prewar, 1953 and 1954 are shown in Table 5.

Table 5

Pre Capita Consumption of Canned Milk in Selected Countries
Prewar - 1953-54

	Prewar		1953		1954	
Rank	Country	Per Capita Consumption	Country	Per Capita Consumption	Country	Per Capita Consumption
		Pounds		Pounds		Pounds
1.	United States	18.5	United States	22.3	United States	21.6
2.	United Kingdom	11.4	Canada	20.5	Canada	20.1
3.	Canada	7.1	United Kingdom	7.4	Australia	7.7
4.	Australia	3.9	Belgium	7.3	German Rep.	7.6
5.	German Rep.	2.5	German Rep.	7.2	Belgium	4.6
6.	Sweden	2.4	Australia	7.0	Norway	4.4
7.	Belgium	1.1	Norway	4.1	United Kingdom	4.2
8.	Netherlands	1.1	Denmark	3.1	Netherlands	3.6
9.	Ireland	1.0	Netherlands	2.7	France	2.3
10.	Denmark	0.8	France	2.4	Denmark	1.2
11.	France	0.5	Switzerland	0.8	Sweden	0.8
12.	Switzerland	0.2	Italy	0.4	Italy	0.4
13.	New Zealand)	N.A.	Sweden	0.3	Ireland)	N.A.
14.	Italy)	N.A.	Ireland	N.A.	New Zealand)	N.A.
15.	Norway)	N.A.	New Zealand	N.A.	Switzerland)	N.A.

Total powdered milk consumption in 1954 for the 15 countries was about the same as 1953. Six countries showed increased use of powdered milk products while 5 showed losses and one country, Denmark, maintained its 1953 level of 1.8 pounds per person.

The Netherlands remained top consumer of powdered milk showing, in 1954, consumption of 6.0 pounds per person, an increase of 0.2 pounds from 1953. The gain of 0.3 pounds by Canada while Norway was losing 0.1 pounds resulted in Canada taking 2nd place rank with total consumption of 5.1 pounds per person compared with 4.8 pounds for Norway's powdered milk use.

The large gainers in consumption were Australia with 0.9 pounds increase, Sweden with 0.7 pounds and the United Kingdom with 0.6 pounds; the countries were ranked 7th, 8th and 5th with consumption per capita rates of 3.7 pounds, 2.9 pounds and 4.1 pounds respectively.

The United States consumed 4.4 pounds per capita in 1954 compared with 4.3 pounds and ranked 4th.

The changing status of the dried milk industry is apparent when per capita consumption data for the prewar period are compared with 1954 figures. In every instance there has been an increase in consumption, some of considerable magnitude; Sweden's consumption of 2.9 pounds per person in 1954 was more than 7 times the prewar rate. Even among the larger consumers of powdered milk during the prewar period the gains have been large. The consumption of 6.0 pounds per capita in 1954 by the Netherlands was almost 3 times the prewar rate and 2nd ranking Canada consumed powdered milk products at almost 4 times its prewar rate of 1.8 pounds per capita. The United States at 4.4 pounds has more than doubled its prewar average consumption.

The rank orders of countries in the per capita consumption of powdered milk products in prewar, 1953 and 1954 are shown in Table 6.

Table 6

Per Capita Consumption of Dried Milk in Selected Countries
Prewar - 1953-54

Rank	Prewar Country	Prewar Per Capita Consumption	1953 Country	1953 Per Capita Consumption	1954 Country	1954 Per Capita Consumption
		pounds		pounds		pounds
1.	Netherlands	2.2	Netherlands	5.8	Netherlands	6.0
2.	Australia	2.0	Norway	4.9	Canada	5.1
3.	United States	1.9	Canada	4.8	Norway	4.8
4.	Canada	1.8	United States	4.3	United States	4.4
5.	Belgium	1.7	Belgium	4.0	United Kingdom	4.1
6.	United Kingdom	1.4	United Kingdom	3.5	Belgium	3.8
7.	Switzerland	1.0	Switzerland	2.9	Australia	3.7
8.	Sweden	0.4	Australia	2.8	Sweden	2.9
9.	Denmark	0.3	Sweden	2.2	Denmark	1.8
10.	Ireland	0.3	Denmark	1.8	German Rep.	1.5
11.	France	0.2	German Rep.	1.7	France	0.8
12.	Greman Rep.	0.2	France	0.9	Italy	0.4
13.	Italy)		Italy)		Switzerland)	
14.	Norway)	N.A.	Ireland)	N.A.	Ireland)	N.A.
15.	New Zealand)		New Zealand)		New Zealand)	

Some data are available from countries other than those appearing in this report, but for various reasons, the information is insufficient to include the country in the tabulor presentation. Some of the countries appear to be large consumers of milk and dairy products. One example is Finland which, on the basis of incomplete data, appears to have consumed approximately 1,400 pounds of milk and dairy products, whole milk equivalent basis, during the year ending June 30, 1954.

The data indicate that per capita consumption of butter is over 30 pounds, an amount which would give Finland a rank among the first 5 consumers of butter. It is hoped that sufficient information will be available next year so that Finland, and several other countries, can be included in the presentation of data on per capita consumption.

As mentioned in the Statistical Note there is no absolute basis for comparison of countries since the data are presented on a country product basis. To make possible an absolute comparison it was decided to use a butterfat basis and the standard of measurement selected was the United States where the average butterfat content of milk in 1954 was reported at 3.87 percent. Whole milk consumed in fluid form and the manufactured products were considered to have been from 3.87 percent fat milk. Furthermore, cognizance was taken of the fact that fat contents of manufacture products also vary between countries; butterfat in butter was reported as high as 83.5 percent while some countries, Italy, for example, produce, consume and export to other countries in the study group, considerable amounts of low-fat cheese.

Table 7 shows whole milk equivalent per capita consumption and the rank order of countries on the basis of country products compared with the per capita consumption of milk and dairy products on the basis of a 3.87 percent whole milk equivalent and the resulting rank order.

Table 7

Rank Orders and Whole Milk Equivalent per Capita Consumption of Milk and Dairy Products in Specified Countries on a Country Prodict Basis and on the Basis of a 3.87 percent Butterfat Whole Milk Equivalent 1954

Country	Country Product Basis	Rank	3.87% Butterfat Basis	Converted Rank	Difference
Ireland	1,425	1	1,259	2	- 66
New Zealand	1,410	2	1,630	1	+220
Sweden	1,173	3	1,150	3	- 23
Australia	1,096	4	1,090	4	- 6
Canada	1,027	5	937	6	- 90
Switzerland	994	6	973	5	- 21
Norway	952	7	927	7	- 25
Belgium	934	8	782	9	-152
Denmark	857	9	888	8	+ 31
France	751	10	670	13	-101
United Kingdom	738	11	675	12	- 63
German Republic	721	12	690	11	- 31
United States	699	13	699	10	0
Netherlands	616	14	565	14	- 51
Italy	297	15	283	15	- 14

By measuring consumption in terms of United States milk on a butterfat basis, New Zealand was the Number 1 consumer in 1954 with a per capita intake of whole milk equivalent of 1,630 pounds. Ireland, because of its low butterfat content milk, consumed only 1,259 pounds of 3.87 percent butterfat whole milk equivalent and was only second in per capita consumption.

Sweden and Australia both maintained their previous rankings as 3rd and 4th, but in the absolute comparisons Switzerland, in spite of a drop of 21 pounds whole milk equivalent from the country product basis, became 5th in rank order while Canada, by the loss of 90 pounds, had to be content with 6th place. Belgium sank to 9th place with a loss of 152 pounds while Norway was 7th at 927 pounds and Denmark 8th at 888 pounds, a rise of 31 pounds per person on the adjustment whole milk equivalent basis.

Since the average butterfat content of the United States in 1954 was used as the measure of an absolute comparison the milk equivalent consumption showed no change and remained at 699 pounds for 1954. However, the United States rank under the latter comparison was 10th compared to 13th place on the country product basis. Following the United States in rank were Western Germany, the United Kingdom and France in that order; France showed the loss of 101 pounds in converting to the absolute comparison basis. The Netherlands and Italy remained in 14th and 15th places respectively and both showed negative differences.

MILK AND DAIRY PRODUCTS: Per Capita Production and Consumption in Specified Countries Prewar Average, Annual 1953 and 1954

COUNTRY	1/ PREWAR Pounds	1953 Pounds	2/ 1954 Pounds
BELGIUM			
Milk Production Per Capita	808	893	913
Milk Consumption Per Capita 3/	777	4/ 958	4/ 934
Per Capita Product Consumption			
Fluid Milk and Cream	173	206	214
Butter	20.6	25.3	24.1
Cheese	8.2	10.5	10.8
Canned Milk	1.1	7.3	4.6
Dried Milk	1.7	4.0	3.8
DENMARK			
Milk Production Per Capita	3,158	2,714	2,704
Milk Consumption Per Capita 3/	885	862	857
Per Capita Product Consumption			
Fluid Milk and Cream	369	386	379
Butter	19.5	18.5	19.0
Cheese	12.2	11.0	11.5
Canned Milk	0.8	5/ 3.1	5/ 1.2
Dried Milk	0.3	1.8	5/ 1.8
FRANCE 6/7/			
Milk Production Per Capita	822	917	983
Milk Consumption Per Capita 3/	631	729	751
Fluid Milk and Cream	190	198	202
Butter	12.7	15.0	15.0
Cheese	14.3	14.5	16.4
Canned Milk	0.5	2.4	2.3
Dried Milk	0.2	0.9	0.8
REPUBLIC OF GERMANY 8/9/			
Milk Production Per Capita	896	753	759
Milk Consumption Per Capita 3/	5/10/ 805	701	721
Per Capita Product Consumption			
Fluid Milk and Cream	5/10/ 307	263	257
Butter	5/10/ 18.0	14.0	15.2
Cheese	5/10/ 7.7	9.5	9.3
Canned Milk	5/10/ 2.5	7.2	5/ 7.6
Dried Milk	5/10/ 0.2	1.7	1.5

(Continued)

MILK AND DAIRY PRODUCTS: Per Capita Production and Consumption in Specified Countries
Prewar Average, Annual 1953 and 1954

COUNTRY	1/ PREWAR	1953	2/ 1954
	Pounds	Pounds	Pounds
IRELAND			
Milk Production Per Capita	1,755	1,808	1,844
Milk Consumption Per Capita 3/	1,152	1,439	1,425
Per Capita Product Consumption			
Fluid Milk and Cream	324	357	351
Butter	33.4	41.1	40.6
Cheese	0.7	2.0	2.7
Canned Milk	1.0	11/	11/
Dried Milk	0.3	11/	11/
ITALY 6/			
Milk Production Per Capita	332	377	385
Milk Consumption Per Capita 3/	4/12/ 225	4/12/ 300	297
Per Capita Product Consumption			
Fluid Milk and Cream	80	112	110
Butter	2.6	3.2	3.0
Cheese	11.3	15.4	15.6
Canned Milk	11/	0.4	5/ 0.4
Dried Milk	11/	0.5	5/ 0.4
NETHERLANDS			
Milk Production Per Capita	1,315	1,223	1,222
Milk Consumption Per Capita 3/	809	600	616
Per Capita Product Consumption			
Fluid Milk and Cream	272	285	287
Butter	15.2	6.0	6.7
Cheese	16.0	15.3	15.0
Canned Milk	1.1	2.7	3.6
Dried Milk	2.2	5.8	6.0
NORWAY 9/			
Milk Production Per Capita	1,019	1,071	1,040
Milk Consumption Per Capita 3/4/12/	924	919	952
Per Capita Product Consumption			
Fluid Milk and Cream	387	509	510
Butter	15.2	8.6	9.4
Cheese	16.9	17.6	19.0
Canned Milk	11/	5/ 4.1	5/ 4.4
Dried Milk	11/	5/ 4.9	5/ 4.8

(Continued)

MILK AND DAIRY PRODUCTS: Per Capita Production and Consumption in Specified Countries, Prewar Average, Annual 1953 and 1954

COUNTRY		PREWAR 1/	1953	1954 2/
		Pounds	Pounds	Pounds
SWEDEN				
Milk Production Per Capita		1,625	1,371	1,335
Milk Consumption Per Capita 3/12/		1,256	1,217	1,173
Per Capita Product Consumption				
Fluid Milk and Cream		521	496	495
Butter		22.1	26.6	24.8
Cheese		14.1	16.2	16.8
Canned Milk		2.4	0.3	0.8
Dried Milk		0.4	2.2	2.9
SWITZERLAND 9/				
Milk Production Per Capita		1,438	1,236	1,268
Milk Consumption Per Capita 3/		1,025	968	994
Per Capita Product Consumption				
Fluid Milk and Cream		511	474	470
Butter		14.3	13.2	14.0
Cheese		17.6	17.0	17.6
Canned Milk		0.2	0.8	11/
Dried Milk		1.0	2.9	11/
UNITED KINGDOM				
Milk Production Per Capita		389	467	474
Milk Consumption Per Capita 3/		970	730	738
Per Capita Product Consumption				
Fluid Milk and Cream		234	342	340
Butter		24.8	13.1	13.8
Cheese		8.8	9.3	9.7
Canned Milk		11.4	7.4	4.2
Dried Milk		1.4	3.5	4.1
AUSTRALIA				
Milk Production Per Capita	10/	1,707	1,381	1,468
Milk Consumption Per Capita 3/	10/	976	1,034	1,096
Per Capita Product Consumption				
Fluid Milk and Cream	10/	234	304	306
Butter	10/	31.4	30.4	32.6
Cheese	10/	3.9	5.1	5.6
Canned Milk	10/	3.9	7.0	7.7
Dried Milk	10/	2.0	2.8	3.7

(Continued)

MILK AND DAIRY PRODUCTS: Per Capita Production and Consumption in Specified Countries, Prewar Average, Annual 1953 and 1954

COUNTRY	1/ PREWAR	1953	2/ 1954
	Pounds	Pounds	Pounds
NEW ZEALAND 10/			
Milk Production Per Capita	6,360	5,735	5,255
Milk Consumption Per Capita 3/	1,307	1,407	1,410
Per Capita Product Consumption			
Fluid Milk and Cream 13/	437	530	527
Butter	40.6	44.0	44.6
Cheese	5.0	6.0	5.8
Canned Milk	3.1	5/14/ 9.5	5/14/ 8.5
Dried Milk	0.6	14/	14/
CANADA			
Milk Production per capita	1,377	1,113	1,111
Milk Consumption per capita 3/	1,223	1,035	1,027
Per Capita Product Consumption			
Fluid Milk and Cream 13/	426	439	437
Butter	31.0	20.9	20.7
Cheese	3.8	6.2	6.3
Canned Milk	7.1	20.5	20.1
Dried Milk	1.8	4.8	5.1
UNITED STATES			
Milk Production Per Capita	803	761	762
Milk Consumption Per Capita 3/	791	688	699
Per Capita Product Consumption			
Fluid Milk and Cream 13/	355	397	395
Butter	16.9	8.5	9.0
Cheese	5.3	7.4	7.6
Canned Milk	18.5	22.3	15/ 21.6
Dried Milk	1.9	4.3	4.4

1/ Prewar averages are for the years 1933-34, 1937-38 for Denmark, Norway, Sweden and Switzerland; 1935-38 for the Republic of Germany, 1935-39 for Canada and the United States, and 1934-38 for others. 2/ Preliminary. 3/ Per capita consumption of fluid milk and dairy products in terms of whole milk equivalent. 4/ Does not include dried whole milk. 5/ Estimated. 6/ Includes the milk of cows, sheep and goats. 7/ Estimates include the SAAR in 1953 and 1954. 8/ Prewar estimates exclude the Western Sectors of Berlin. 9/ Includes the milk of cows and goats. 10/ Years ending June 30. 11/ Not available. 12/ Does not include canned whole milk. 13/ Milk for ice cream included. 14/ Dried milk included with canned milk on individual product weight basis. 15/ Estimated for skimmed milk.

Foreign Agricultural Service. Prepared or estimated from Official Statistics, Reports of Agricultural Attaches and other U.S. Representatives abroad, and other information.

943
117
p.2

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THE STATUS OF CASEIN PRODUCTION AND TRADE

by
Terrence W. McCabe

For the second consecutive year world casein output has increased. Casein production in 1954 exceeded 205 million pounds, an increase of 27 percent from 1953 which, in turn, was only slightly under prewar production for the primary reporting countries.

A considerable part of the increase in output has apparently been used in the manufacturing countries as it was not matched by an equal upward change in exports; and imports, as reported by the primary importers of casein, were less than 1953 receipts. Exports of the principal suppliers amounted to just under 144 million pounds in 1954 compared to shipments of 132.7 million in 1953. On the import side of the picture, primary importers, including the Netherlands which also exports, reported receipts of 136.4 million pounds compared to 137.4 million in the previous twelve month period.

Data currently available indicate that the upward swing in casein production will continue during 1955 and, furthermore, be augmented by increased exports from producing countries. Primary evidence of the firmness of the casein situation is found in the recommendation of the New Zealand Dairy Board, as reported in Foreign Crops and Markets for July 7, 1955, that the New Zealand dairy industry reduce its output of cheese so as to take advantage of the more stabilized market for casein. It was thought that the change might raise technical difficulties, but New Zealand, for the year ending June 30, 1955, reported casein production may be as much as 25.6 million pounds, an increase of almost 40 percent over the output for the 12 month period ending June 1954.

Other indicators are Canadian production during the January-June period in 1955 at 2.8 million pounds is 19 percent over the same period last year and heavier imports have been registered from both Argentina and France, the principal exporting countries. Argentina's export trade in the first part of 1955 is from 15 to 20 percent over 1954 and stocks are low; shipments from France are reported at 40 percent higher during the first months of this year; however, a recent slacking in French shipments indicates that French producers are depending on output from the late flush period. The United States, the principal importer of casein has increased its takings during the first six months of 1955 more than 35 percent above receipts during the January-June period in 1954.

Furthermore, despite the firmness of the market for casein there has been no violent price changes and prices are generally under 1954. Prices from Argentina on an f.o.b. basis for July averaged about 19.4 cents a pound, one cent above the April price, but 1.8 cents under the July 1954 price. New Zealand casein, which was quoted nominally on the London market during April at 20.6 cents a pound following slight price drops for Polish and French casein, was bringing 21.6 cents to 22.6 cents in July. Argentine casein prices on the New York market during the latter part of August 1955 ranged from 23.5 cents to 25 cents per pound, up 2 to 3 cents from April, but 1 to 1.5 cents under quotations for August 1954.

Concurrent with the upward trend in production and the firm trade situation in casein have been the poor export outlook on cheese and the general price reductions in nonfat dry milk solids; only the United States has maintained a relatively high price on nonfat dry milk solids. With nonfat spray-dried milk being supported at 16 cents per pound there is no likelihood that the Unied States' production of casein will increase materially.

PRODUCTION OF CASEIN IN SPECIFIED COUNTRIES

1938, 1953 and 1954
(000 pounds)

Country	1938	1953	1954
Denmark	1,155 1/	1,765	1,700 2/
France	36,400	19,825	35,000 2/
Italy	7,590 3/	13,200	20,280
Netherlands	5,265	1,450	1,940
Norway	7,060	7,890	11,000 2/
Republic Germany	12,545 4/	6,170	9,910
Switzerland	1,100	2,435	2,200
Argentina	36,850	78,370	83,775
Australia 5/	5,040	5,870	8,415
New Zealand	4,140	15,910	21,455
Canada	1,790	4,885	6,165
United States	48,500	5,530	5,500 2/
Total	167,435	163,300	207,340

1/ 1939. 2/ Estimated. 3/ Dry casein production for 1936. 4/ All pre-war Germany. 5/ Year ending June 30.

The increase in estimated production in France during 1954 at more than 75 percent over 1953 is the largest gain in producing countries. It is quite possible that production in France was equal to or greater than prewar. In 1953, with a production of 19.8 million pounds of casein, France exported 15.4 million pounds; in 1954 French shipments were reported at almost double the 1953 figure. If only the 1953 difference between production and exports were maintained in 1954, production during the year would approximate 35 million pounds; however, France's domestic consumption is said to have increased and internal needs may require 10 million pounds.

The Republic of Germany increased its production more than 60 percent and at 9.9 million pounds is producing casein at a rate four-fifths of the prewar level for all Germany. Italy, which is a large importer of casein, showed the third largest relative gain, increasing its output 50 percent over 1953 production of 13.2 million pounds. Denmark's position as a producer has declined considerably since 1951 when it produced more than 44 million tons of casein while exporting only 26 million. Danish production figures for 1954 are not yet final, but it is estimated that production will be less than 1953.

The gain of 5.5 million pounds in New Zealand production during 1954 was an increase of more than one-third. However, Australia's gain of 2.5 million pounds represented an increase of 43 percent. New Zealand is now producing at more than 5 times its prewar level.

In the Americas Argentina, the world's largest producer and exporter of casein, pushed its output up 5.4 million pounds more than the 1953 production of 78.4 million pounds; during both 1953 and 1954 Argentina production was more than double the pre-war level. Canada reported a production of 6.2 million pounds of casein in 1954, more than 25 percent greater than 1953. While official figures on United States production in 1954 have not been released, casein output was no greater than the previous year, which was the lowest on record. The United States is now producing at just slightly more than one-ninth of its prewar output.

World exports showed a gain of only one-fourth of the 44 million pound gain registered in production. Exports by the primary exporting countries are shown below for 1953 and 1954.

EXPORTS OF CASEIN BY SPECIFIED COUNTRIES
1953 and 1954
(000 pounds)

Country	1953	1954
Denmark	2,550	1,615
France	15,350	30,240
Netherlands	1,990	3,860
Norway	3,600	3,250
Switzerland	565	1,300
Union of So. Africa 1/	2,800	4,000 2/
Argentina	81,670	73,100
Canada	2,790	4,365
Australia	2,100	4,000
New Zealand	19,265	18,245
Total	132,680	143,975

1/ Including Southwest Africa. 2/ Estimated on basis of January-September data.

The decline in Argentina trade during 1954 was more than offset by the increase in the gain in casein export by France. France, beset by considerable internal difficulties with dairy surpluses, found a ready market for its increased production of casein and shipped, during 1954, almost double its exports during the previous year 1953; as stated previously, this increased trade activity has continued into 1955 with shipments during the first months being considerably above the 1954 period. About 60 percent of the gain in French exports was registered by increased takings by the United States, the United Kingdom and Italy. The United States took 3.6 million pounds of French casein in 1954 compared with less than 1 million in 1953; the United Kingdom at 5.9 million pounds showed a gain of 4.2 million pounds, while Italy took 4.2 million pounds of casein from France in 1954 compared with 2.5 million pounds in 1953.

Only Italy and Finland of the primary purchasers showed increased imports of Argentina casein during 1954. Most of the buyers from Argentina showed decreased takings from 1953, but the major loss in Argentina's exports was from reduced purchases by the United Kingdom and the United States, the two largest importing countries. The United Kingdom obtained its casein from other sources, but the United States reduced its total imports.

New Zealand, like Argentina, was a major exporter showing a loss in shipments from the previous year. However, New Zealand's loss was 1 million pounds only, down about 5 percent from 1953 exports of 19.3 million pounds; shipments during the latter part of 1954 were running slightly ahead of those for the similar period in the previous year. Australia and Canada both showed increases in exports with Canada's being directed toward the United States. Imports of casein by principal users was slightly less in 1954 than the previous year; the reported imports at 136.4 million pounds was just less than a 1 percent loss from 1953.

IMPORTS OF CASEIN BY SPECIFIED COUNTRIES
1953 and 1954
(000 pounds)

Country	1953	1954
Austria	1,230	560
Belgium	1,975	2,350
Finland	2,645	4,280
German Republic	13,670	12,730
Italy	7,320	13,730
Netherlands	2,180	2,105
Sweden	2,710	2,780
United Kingdom	22,760	32,745
United States	74,250	59,805
Japan	8,740	5,745
Total	137,480	136,430

The main change in the 1954 import situation was the drop of almost 14.5 million pounds by the United States. This decline was more than offset by the increased takings by the United Kingdom and Italy which together took 16.4 million more pounds of casein than in 1953. Of the other large importers the German Republic showed a slight decline while Japan reduced its receipts of foreign casein by about 1.4 million pounds to 5.6 million pounds.

Only Canada, France and Australia showed any considerable increase in shipments to the United States in 1954. Canada shipped 1.1 million more pounds than in 1953 while Australia gained about 0.4 million pounds; as stated previously the increase in receipts from France amounted to about 2.6 million pounds. The decline of 3.8 million pounds in receipts from New Zealand by the United States was more than recovered by New Zealand in increased takings by the United Kingdom. In 1954 the United Kingdom took 32.8 million pounds of lactic casein from New Zealand, an increase of 6.2 million pounds, while imports of New Zealand rennet casein increased 16.7 million pounds to 33.1 million. The Union of South Africa shipped 1.8 million pounds to the United Kingdom in 1954, an increase of 17 percent. France was a primary gainer of increased takings by the United Kingdom, shipping 7.6 million pounds of lactic casein, a gain of 6 million pounds over 1953.

There are other producers and exporters of casein as well as other importers of the product, but complete statistical information from these countries is not available. Spain, for example, has been an importer of casein, particularly from Argentina. However, Argentina has not reported exports to Spain since 1952, while the latest information from Spain on imports is an approximate 1 million pounds received in 1953.

Similarly, Poland is known to be a fairly large producer of casein and shipped more than 3 million pounds to the United Kingdom in 1954. Poland's production, however, is believed to be going into export channels principally to other eastern European countries, particularly the Soviet Union. The demand for casein by her Eastern European neighbors apparently is exceeding Poland's manufacturing capacity since Poland has been reported making inquiries for the purchase of 3 million pounds of the product from Argentina.

European countries are not producing anywhere near their requirements and, as a consequence, must depend upon imports. With cheese production showing a steady increase since the end of World War II, while export trade from the principal supplying countries is only one-third greater than prewar, it appears that cheese production in 1955 may decline in order to meet mounting casein needs. If such is the case, Canada, New Zealand, Australia and the Union of South Africa may have a larger part in the casein picture in 1955; these countries before the war had only an insignificant portion of the world's production and trade, but in 1955 production and exports of these countries accounted for more than 20 percent of the total of the specified countries.

43
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THE DAIRY PRODUCTS SITUATION IN CERTAIN SOUTH AMERICAN AND CENTRAL AMERICAN COUNTRIES

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Marketing Specialist

Introduction

A study was made during June and July in Peru, Ecuador, Colombia, Venezuela, British Guiana, Panama, and Guatemala by the Foreign Agricultural Service to determine the availability, retail prices and sources of imports of dairy products. The study also provided information regarding import restrictions, the feasibility of supplementing normal milk supplies with recombined milk, and the further utilization of United States dairy products on these markets.

The study showed that the per-capita availability based on United States standards of milk is low. However, in general, milk and dairy products are too high in price to be accessible to the mass market. Therefore, milk and dairy products are generally considered luxury items. In many of the areas, more safe, high quality milk could be sold even at the existing high retail prices.

With only a few exceptions, apparently there is not a full appreciation of the necessity for, or the desire, to accept rigid sanitary control and regulations necessary to produce a safe, healthful milk supply.

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[1] The author wishes to acknowledge the valuable assistance and information supplied by Agricultural Attaches and their staffs, United States Government representatives abroad; local Government officials and members of the dairy industry in the countries surveyed.

Although recombined milk would provide a healthful, nutritious supplement to the normal supply in the countries covered by the study, in most instances it is not looked upon with favor. In general, due to the high retail cost of milk and the low quality of the bulk of the milk supply, there are surpluses at certain times of the year.

PERU

Lima, with a population of approximately 700,000 has an available per-capita milk supply of less than a quarter of a pint per day. Fluid milk retails from 8.4 cents (raw, non-bottled) to 15.9 cents (bottled, pasteurized, homogenized) per liter. The bulk of the milk supply is produced by lot-fed, large herds, located on the outskirts of the city. Reports indicate that the average daily wage for workers ranges from approximately a $1.40 to $3.34 a day. This range includes employees in commerce, banks, services, public administration and the manufacturing industry. The average wage for those employed in agriculture and mining is reported to be less than $1.40 per day. It, therefore, appears that even at the lower price for raw, non-bottled milk it is economically impossible for the average worker greatly to increase his intake.

Marketing Situation - Manufactured Dairy Products

Evaporated milk apparently is the only dairy product produced domestically in sufficient quantity to supply a significant percentage of the domestic market. The retail price for this product has been established by the Government at approximately 14 cents a can. The price of imported evaporated milk is not set by the Government and ranges from 17 to 19 cents per can.

The principal imported cheeses appearing on the Lima market are from Denmark, the Netherlands and Argentina. The following c.i.f. prices, Callao, were reported: Danish, Danbo and Samsoe, 72 cents per kilo. (1 kilo equals 2.2046 pounds); Dutch, Edam and Gouda 76 cents per kilo.; Argentina Sbrintz 97 cents per kilo. Retail cheese prices noted in stores were: Dutch cheese, 63 cents per kilo.; Danish processed Danbo-Samsoe (45 percent fat, 6 oz. package) 31 cents; Dutch processed (48 percent fat, 6 oz. package) 36 cents; Italian processed (6 oz. package) 40 cents.

Dry whole milk retail prices were: United States, 1-pound can, 82 cents to 95 cents; 5-pound can, $3.31 to $4.50.

Argentina is the principal supplier of butter. The butter is sold under a special financial arrangement resulting in a c.i.f., Callao, price of 47 cents a pound in June. This arrangement has been in effect since 1954. It is impossible to determine how long it will continue. The Argentine butter is shipped in bulk in wooden boxes. Because of the scarcity of wood, the wooden box is quite a sales incentive. The following retail butter prices were noted: Argentina, 68 cents a pound, Danish, 76 cents a pound. A Danish c.i.f. price, Callao, for 1-pound, 1/2-pound and 1/4-pound prints, packed in wooden cases of 30-pounds, of $1.10 per kilo. was reported. If more favorable marketing conditions could be established, greater interest would be shown in United States butter.

The leading exporters of dairy products to Peru in 1954 by major products were as follows: (Product listed in accordance with Peruvian customs description)

Product & Source	Pounds
Whole evaporated milk containing not less than 7.8 percent fat	
Netherlands	11,662,039
United States	2,526,950
Denmark	135,440
Canada	110,157
Whole condensed milk containing not less than 8 percent fat	
Netherlands	362,205
Denmark	68,576
Whole powder milk, not less than 24 percent fat in hermetically sealed containers for infants' feeding	
United States	398,982
Netherlands	14,625
Denmark	10,911
Canada	9,101
Whole powder milk in bulk, for industrial use	
Denmark	172,973
Netherlands	26,766
United States	2,806
Canada	2,573
Skimmed milk	
United States	1,133,713
Canada	407,624
Denmark	154,931
Netherlands	19,592
Butter, with or without salt	
Argentina	1,835,810
Denmark	865,916
United States	663,296
Australia	49,019
Netherlands	25,002

Product & Source	Pounds
Soft cheese, such as Camembert, Roquefort, and Gorgonzola	
Netherlands	404,370
Denmark	324,932
United States	41,052
Switzerland	23,605
Argentina	49,099
Italy	18,060
Sweden	25,662
Hard cheese, such as Parmesan, Gruyere, Lodigiano and similar 1/	
Argentina	311,744
Italy	31,881
Chile	11,708

1/ Apparently Edam, Gouda, Samsoe and Danbo included in this category.

Prospects for Recombining Operations

Prospects for recombining operations exist in areas where it is not feasible or economical to maintain dairy production. One such area is at Talara where a petroleum corporation maintains a large establishment. This company desires that the American colony be provided with milk and dairy products. The company restaurant operator is now producing 40 gallons of recombined milk and 20 gallons of ice cream daily for the restaurant. He anticipates expanding this operation to provide milk and dairy products for the American employees and then develop a market outlet among the 20,000 Peruvian employees of the company.

Interest was shown by one coastal hacienda manager in the possibility of substituting a recombined product for the present uneconomical dairy operation producing 200 liters of milk a day. If this introduction proves successful, the manager stated that 11 other independent hacienda operators, employing 25,000 people would join him in the recombining operation.

Import duties

The following specific duties per gross kilo. were reported: butter, 5.7 cents; cheese from 13.3 cents to 28.5 cents; evaporated milk (7.8 percent fat), 3.8 cents; condensed milk (8 percent fat), 5.7 cents; dry whole milk, 1.9 cents and dry skim milk 2.8 cents.

ECUADOR

Quito Area

Based on the purchasing power of the majority of the people, there is an adequate supply of milk in this area. Unofficial estimates from several sources place the average wage for the worker at approximately 60 cents a day. There is a daily milk supply of approximately 75,000 liters for approximately 250,000 people. Raw, unbottled milk retails for approximately 9 cents a liter. One plant retails 4,000 to 4,500 liters of bottled pasteurized milk in the Quito market at approximately 11.6 cents per liter.

It is estimated that approximately 30,000 liters of milk a day is made into butter and cheese on the haciendas and sold in the cities of Quito and Guayaquil. A small percentage of this production is attractively and sanitarily packed in parchment paper and labeled. It appears that total milk production could easily be raised with a proper demand-price relationship. UNICEF gave the city of Quito the equipment for a new municipal plant with an approximate capacity of 60,000 liters. To date the construction of the plant has not begun.

Guayaquil Area

Guayaquil is a thriving port city of approximately 350,000 people. The milk supply is unofficially estimated at 40,000 liters. One-fourth to one-half of this supply is sold as raw, unbottled milk. Two plants (one municipal, one cooperative) produce pasteurized bottled milk. An unofficial estimate of the average wage for workers is $1.74 a day.

The bottled milk sold for 17.4 cents to 20.3 cents a liter. The raw milk price varied depending upon the degree of adulteration. There is an apparent milk shortage in this area. It was stated that more milk could be sold if available. It appears that the Quito area could supply the milk required in Guayaquil. However, there may be reasons why this will not be done. The municipality plans to build a new, modern bottling plant within a year. After its completion, it is planned to ban the sale of raw milk.

Marketing Situation - Manufactured Dairy Products

There is apparently an ample supply in Ecuador of domestically manufactured butter and cheese at the present level of purchasing power. The domestic cheese is the typical white cheese predominating in much of the South American and Central American areas. It is usually a loosely, matted curd, showing many mechanical openings, with none or very little aging. In Ecuador as on other markets, it is marketed as a $1\frac{1}{4}$ to $1\frac{1}{2}$-pound flat, round cheese. In some areas, however, it appears on the market in large blocks. The price ranged from 23 cents per pound for the nonwrapped, apparent low quality, to 46 cents per pound for the packaged higher quality cheese. A higher proportion of the nonwrapped, lower priced cheese was seen on the Quito market.

Domestically manufactured butter is retailed, nonpackaged (dipped from bulk box of other container) and in 3/4 and 1-pound parchment wrapped packages. The nonwrapped butter ranged in price from 44½ cents to 49 cents a pound. The wrapped butter sold for from 63.8 to 69.6 cents a pound (the higher price appearing on the Guayaquil market).

Dry whole milk retail prices were United States 69.6 to 87 cents per pound. It was reported that Danish and Dutch dry whole milk was offered at prices which would make possible a retail price of 58 cents a pound. This was a recent offer and thus far had very little affect on the market due to the strong preference for established well-advertised United States brands.

Retail prices of evaporated milk: United States 23.2 cents, 14½ oz. can, 20.3 cents, 6 oz. can. Sweetened condensed milk: Dutch, 14 oz. can, 34.8 cents, 4 oz. can, 11.6 cents.

There is an excellent, small ice cream operation in Guayaquil producing 240 gallons a day using United States dry mix and nonfat dry milk solids from a non-United States source. Interest was shown in placing the next nonfat order with a United States supplier. Very high import duties on canned fruit and flavoring were reported. Two-ounce bars retailed for 5.8 cents, 4 oz. for 11.6 cents, and a small cup for 8.7 cents.

The leading exporters of dairy products to Ecuador in 1954 by major product were as follows: (Product listed in accordance with Ecuadoran custom description)

Product & Source	Pounds
Canned powdered milk without sugar	
Canada	2,840
United States	747,681
Sweden	10,992
Denmark	156,910
United Kingdom	2,156
Netherlands	612,111
Belgium	186,258
Germany	6,279
Australia	4,557
Other canned cream and milk	
Canada	11,199
United States	40,269
Sweden	40,807
Denmark	49,476
United Kindgom	2,141
Netherlands	288,108
Belgium	26,471

Product & Source	Pounds
Cheese	
Canada	1,592
United States	8,168
Argentina	8,053
Denmark	10,765
United Kingdom	121
Netherlands	4,464
Belgium	507
Germany	536
Italy	13,292

Prospects for Recombining Operations

It would appear necessary and economical under existing circumstances to use recombined milk and dairy products to supplement the normal supply of milk that will be available to the new Guayaquil municipal dairy plant when it is placed in operation. This suggestion was favorably received by city officials and agricultural representatives.

From reports received there also appears to be a potential market for recombined milk in the coastal province of Manabi. Three towns in the province with a combined population of 80,000 to 100,000 could be serviced from one central plant. The population concentration, the nonavailability of milk, and the average wage of the worker indicates a good market.

Import duties

Product	Duty per Kilogram Sucres	Duty per Kilogram U.S. cents
Whole fresh milk, or skimmed milk whipped cream, milk curd, sour milk 1/ (including pasteurized milk)	0.40	2.3
Cream 2/	5.00	.29
Cream or milk in powdered or solid form, condensed, with or without sugar 3/		
a) Powdered, without sugar	1.00	6.6
b) Canned in other manner	1.00	6.6
Fresh or salted butter 1/	5.00	.29
Cheese of every classification 1/	2.50	19.5

1/ Free rate of exchange (sucre worth slightly less).
2/ Evaporated cream - official rate of exchange.
3/ Official rate.

COLOMBIA

Cali, with an approximate population of 300,000, has a daily milk supply of approximately 56,000 liters. A plant opened recently, with French "Seila" equipment, is now supplying the city with 4,000 bottles (750-gram bottle) of pasteurized, homogenized milk daily. This milk sells for 60 centavos [2] (24 cents or 16.2 cents). The raw, unbottled milk sells for 35 (14 cents or 9.4 cents) to 45 (18 cents or 12 cents) centavos for a 750-gram quantity.

Bogota, with an approximate population of 700,000, has a milk supply of approximately 190,000 liters. The price ranges from 35 centavos (14 cents or 8.8 cents) for lower quality raw milk to 60 centavos (24 cents or 15 cents) (80 centavos /32 cents or 20 cents/ during certain periods of the year) for the best quality pasteurized, homogenized milk. The volume of high quality, bottled milk on the market is a small percentage of the total supply.

The average daily wage (including skilled workers and office help) was unofficially estimated to be between 6½ ($2.60 or $1.63) and 7 ($2.80 or $1.75) pesos per day for both cities. However, it is apparent that even at the higher prices a greater volume of high quality, bottled, pasteurized milk could be sold if available to the high income group. There appears to be an adequate supply of milk and dairy products for the mass market at the present (July) retail prices. Officials were definite in their statements that domestic production is adequate for the domestic market.

The Cauca Valley is the large milk producing area of Colombia. A jointly operated Nestle-Borden plant, locally known as Cicolac, is located in this area and produces dry whole milk and dry milks of varying fats. It is reported that the daily production of dry milk represents 57,353, 750-gram bottled equivalents, or 27 percent of the daily milk production in the Valley. The production of this plant is marketed in Colombia under the Nestle, Nido label, and the Borden, Klim label.

Marketing Situation - Manufactured Dairy Products

Many varieties of domestically manufactured, attractively packaged cheeses and several brands of butter (including foil wrapped packages) are available in all food stores in both major cities. The domestic butter in foil wrap retailed for 4.50 pesos ($1.80 or $1.13) per pound and in parchment wrap, 3.70 pesos ($1.48 or 93 cents) per pound. Domestic cheese cut from 15 to 20-pound blocks sold for 2 pesos (80 cents or 50 cents) per pound. Small packaged varieties retailed for from 4 ($1.60 or $1.00) to 6 ($2.40 or $1.50) pesos per pound (all domestic products).

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[2] 100 centavos to a peso. At time of survey official rate of exchange 2.5 pesos per U.S. dollar; free rate in Cali 3.7 pesos per U.S. dollar. In Bogota 3.9 to 4 pesos per dollar. Prices are converted on the basis of the official rate and then on the free rate.

Domestically manufactured Klim and Nido dry whole milk retailed for 3.10 pesos ($1.24 or 77.5 cents) per pound. Only a few cans of imported United States dry whole milk were noted. It was apparent from the rusty edges and dusty condition of the cans that it was old inventory. The retail price was 3.50 pesos ($1.40 or 87.5 cents) per pound.

Retail prices for evaporated milk were: United States (one source) 2 pesos (80 cents or 50 cents) per 14½ oz. can; Canadian 1.80 pesos (72 cents or 45 cents) per 14½ oz. can. It was reported that in other areas of the city the price per can would range down to 1.70 pesos (68 cents or 42.5 cents).

Retail prices on miscellaneous dairy items: yoghurt, 250-gram jar, 4 pesos ($1.60 or $1.00) pesos; fresh cream, 200-gram paper container, 2.20 pesos (88 cents or 55 cents).

Imports of dairy products by Colombia in 1954 (sources not available)

Product	Pounds
Milk 1/	6,003,690
Cheese 2/	570,537
Butter 2/	24,341
Cream	11,151

1/ Powdered, condensed, canned
2/ 10 months

In 1953, the United States and the Netherlands were the major sources of processed milks.

Import Duties

In 1955, new import duties and regulations were put in effect. With the application of the new duties the presently accepted prices for United States Government stocks of dairy products are too high to encourage any movement to Colombia. These duties prohibit the suggested recombining possibility unless the ingredients would be imported duty free by the Government importing agency, INA. The import duties are as follows:

Product	Specific Duty (Per Kilo) Pesos - Centavos	Ad Valorem (fob Cost plus freight) 1/	Stamp tax (fob Price converted to Pesos at Official 2.5 per $ rate)
		PERCENT	
Butter, fresh or salted, (whether or not in blocks)	1.20	25	100
Condensed, powdered milk or cream - with or without sugar 2/	1.00	25	30
Cream	.25	25	80
Fresh milk	.15	25	80

1/ FOB cost converted to pesos at official rate of 2.5; freight converted at approximately 2.6.

2/ Evaporated milk is included in this "catch-all" category. It would appear that due to lack of local production that this product could be placed in a separate category at a lower rate without detrimental effect.

Note: Dollars used in transactions must be purchased on open market at free rate (3.9 to 4.0 pesos per $ at time of survey). Since May, a deposit, amounting to 30 percent of the order value in dollars, must be made at the time of issuance of the import license.

Prospects for Recombined Milk

Only one potential commercial recombining operation was found in Colombia. A company operating a factory employing 400 people in a town of approximately 140,000 people is interested in establishing a dairy plant. In July there was a raw milk supply of approximately 25,000, 750-gram bottle equivalent, per day. During certain times of the year, this supply may decrease 45 to 50 percent. Due to the uncertainty and fluctuation of supply, the plan for the plant was about to be abandoned. It appears that recombining is the answer for a steady uniform supplemental supply.

Governmental officials appeared to show interest in recombining as a possible means of utilizing the nonfat dry milk solids and butter included in the present United States Public Law 480 Program, the milk to be used in school lunch programs, hospitals, etc. It was suggested that the Government could contract with present bottling plants to produce this milk. It was further suggested that the nonfat dry milk solids and butter could be used as basic ingredients by the presently expanding domestic ice cream industry, and the nonfat by bakeries, without interfering with the present market of the producing plants.

VENEZUELA

The milk situation in Venezuela appeared very involved. The producers supplying the Caracas market were receiving from 21.6 to 22.8 cents per liter plus a Government subsidy of 6.5 cents per liter or a total of 26.1 to 27.3 cents per liter for all milk produced for fluid consumption as pasteurized milk. Caracas, with a population of approximately 700,000 is supplied with 120,000 quarts of milk a day - all pasteurized and packaged in single service containers. Although the standard of living and the average wage is high, the 30-cent-a-quart retail price for the milk encourages the use of dry whole milk at a lower cost per quart. There appears to be an understanding and appreciation of municipal health control over the production of bottled milk and necessity for adequate plant clean-up on this market.

The largest milk producing area is located in the state, Zulia. Production of the area is reported to be approximately 500,000 liters per day with approximately 50,000 liters used as fluid milk. Located at Santa Barbara in the state of Zulia is a jointly operated Nestle-Borden plant, commonly known as Indulac, manufacturing dry whole milk. The production of this operation was reported for 1954 to be 3,750 metric tons of dry whole milk. The remainder of the milk in this area is made into factory butter and farm cheese. It was reported that Nestle-Borden pays approximately 12 cents per liter for milk with a reimbursement by the Government of approximately 4½ cents per liter for every liter of milk manufactured into powder. Importers are permitted to import dry whole milk duty free if they purchase 1-pound of domestically manufactured dry whole milk at a fixed Government price for every 6-pounds of dry whole milk imported. The price that importers must pay for the domestically manufactured dry whole milk was reported to be 23.40 for a case of 6, 5-pound tins (78 cents a pound); $12.23 for a case of 6, 2½-pound tins (81.6 cents a pound); $10.32 for a case of 12, 1-pound tins (86 cents a pound).

Marketing Situation - Manufactured Dairy Products

There is apparently an ample supply of butter, with some sources indicating a surplus. The butter is manufactured from farm-separated cream, and based on observations of the packaged butter at retail outlets, quality improvement work could be done. Domestic butter retailed at approximately $1.11 to $1.14 a pound and imported butter approximately 1.29 to $1.49 a pound.

There is a production of domestic cheese but little appeared on the retail market in Caracas. Ample stocks of imported cheese were, however, in evidence. The following c.i.f. prices were reported: Danish natural cheese 77 cents per kilo. (34 cents a pound); Danish blue cheese 98 cents per kilo. (44.5 cents a pound), Danish processed cheese 65 3/4 cents per kilo. (29.8 cents a pound). Retail prices observed were: United States, processed cheese, 58½ cents per half pound, 52½ cents for specialty 6 oz., cheddar 8 oz. 67½ cents, processed cheese food, 5 oz. jar, 52½ cents. Danish process cheese spread 4 oz. 28½ cents to 33 cents, processed Swiss Cheese, 8 oz. 67½ cents, processed Gruyere 6 oz., 67½ cents; Danish blue cheese ¼ kilo., 60 cents, Fynbo cheese, 354 grams, 57 cents. Dutch Gouda ½-pound, 66 cents. Domestic cheese 69 to 75 cents a pound. All Danish processed cheese was labelled 45 percent fat.

Retail price for evaporated milk: United States, 27 cents, 14½ oz. can; 13½ cents, 6 oz. can.

Retail price sweetened condensed milk: Canadian, 37½ cents, 14 oz. can; Danish, 36 cents 14 oz. can.

Retail price canned cream 23 percent fat, 6 oz. can, 40.5 cents; 6 oz. can, no fat designation, 31½ cents.

Eight brands of United States dry whole milk were observed on the market. Retail prices range from 67.5 cents to $1.12 per 1-pound tin, 2½-pound tins from $1.35 to 1.87, 5-pound tins from $2.62 to $3.49. Three brands of Dutch dry whole milk were seen with retail prices for 2½-pound tins ranging from $1.32 to $1.50, 5-pound tin, $2.92 to $3.15. Danish, 5-pound tin, $2.92; Swedish, 2½-pound tin, 1.60. Domestic, 1-pound tin, 67½ cents, 2½-pound tin, 1.50. It was indicated from the name and address on 3 of the United States products that the powder was apparently purchased in bulk and packaged for overseas shipment under the company name. The foreign brands were labeled 28 percent fat except one which was marked 26 percent. United States and domestic powder marked 26 percent fat.

All domestic "ice cream" is manufactured from imported nonfat dry milk solids and vegetable fat.

The leading exporters of dairy products to Venezuela in 1954 and the first three months of 1955 were: (Product listed in accordance with Venezuela customs description).

Product & Source	Pounds 1954	Pounds Jan. - March 1955
Cheese		
Australia	3,593	-
Argentina	2,530,991	806,910
Germany	996	-
Canada	12,692	-
Chile	-	1,675
Denmark	400,027	161,333
United States	1,167,157	350,739
France	10,904	4,381
United Kingdom	28,541	-
Netherlands	6,438,744	1,266,388
Italy	740,613	405,600
Norway	5,077	--
Switzerland	251,402	78,160
Sweden	238	--
Preserved Milk		
Germany	10,758	4,844
Belgium	59,405	10,922
Canada	15,318,169	3,222,038
Denmark	3,140,891	908,873
United States	45,596,011	10,048,728
Spain	-	4
United Kingdom	2,568	84,784
Netherlands	13,124,557	2,754,291
Switzerland	6,845	-
Sweden	1,172,990	173,326
Butter		
Australia	44,991	5,798
Canada	25,970	-
Denmark	2,282,517	16,001
United States	186,921	26,634
Netherlands	264,118	-
Italy	1,191	-
Lebanon	38	-

Import Duties

Product	Duty per gross kilogram Bolivares	 Dollars
Butter	2.20	.66
Cheese Under the supplementary trade agreement between the United States and Venezuela, Cheese, cheddar type, from the United States is dutiable at the rate of Bs. 1.00 (30 cents) per gross kilogram.	1.20	.36
Ice cream and sherbets	6.00	1.80
Mixtures for the manufacture of ice cream and sherbets	10.00	3.00
Cream Cream must have a natural fat percentage which exceeds 18 percent, and does not pass 70 percent	1.20	.36
Preserved milk (including evaporated, condensed, dried skimmed, and dried whole milk) 1/	0.50	.15

1/ License for the import of duty free powdered milk from the United States must be obtained from Ministry of Development. Since March 2, 1955, an importer of powdered whole milk must show the licensing authority that one unit of local milk powder has been purchased for each six to be imported. There was reported a strong agitation to have this ratio modified to 1:4, but unless the purchase price of local milk is reduced it would be cheaper to pay the full duty than to comply with the 1:4 ratio.

Prospects for Recombining Operations

With the current fluid milk production situation there appears to be no opportunity for recombining operations. However, a new Swedish financed plant has recently been placed in operation in Caracas. This plant is producing pints of a pineapple-flavored, nonfat dry milk solids drink using the Swedish, Tetra-Pak container. The product is sold for 15 cents a pint. The nonfat dry milk solids are obtained from a non-United States source at a c.i.f. price of 11½ cents a pound. The plant capacity is 15,000 liters.

BRITISH GUIANA

Georgetown, with a population of approximately 100,000 people, has only raw milk. Regulations specify that all milk to be sold retail must pass through a Government control station where it is sold to authorized peddlers. The control plant is receiving approximately 1,400 imperial gallons a day. In addition, there is a small quantity of milk that is not brought to the control station. The retail price of milk is 7 to 8 cents per imperial pint.

The Government of British Guiana has purchased Aluminum Plant and Vessel Company, Ltd. (APV) equipment for a new pasteurizing plant to bottle 2,500 to 3,000 imperial gallons of milk per day. The present raw milk supply cannot support this volume. However, even though the average wage is low, this volume of pasteurized, good-quality milk could probably be sold at existing prices. It, therefore, appears feasible to supplement the normal supply with recombined milk when the new plant is in operation.

The bulk of the raw milk supply of Georgetown comes from small herds, many of which are maintained in sheds behind homes near the city.

Marketing Situation - Manufactured Dairy Products

Ice cream is the only domestically manufactured dairy product on the Georgetown market.

Imported New Zealand Anchor brand butter was selling for 70.5 cents for approximately a pound. Butter from England labeled "cooking butter" was selling for 24.7 cents per half pound. Additional retail prices were: English cheddar cheese, 37.6 cents a pound; Danish natural cheese, 57.6 cents a pound; Norwegian processed cheese, 4½ oz. 20.3 cents, cheese foods, 4½ oz., 19.4 cents; Danish processed, 4 oz., 31.7 to 36.4 cents.

Dry whole milk retail prices: Dutch 5-pound tin (4 brands) $2.49 to $2.69, 2½-pound tin $1.32 to $1.78, 1-pound tin 59.9 cents to 61.7 cents; Danish 5-pound tin, $3.34, 2½-pound $1.82; Australia 3-pound tin, $1.78, 12 oz., 47 cents; United States 5-pound tin, $4.06, 2½-pound, $2.15, 1-pound 88 cents.

Evaporated milk retail price: Dutch 15.3 cents to 16.5 cents per 14½ oz. can. Sweetened condensed milk: English 16.5 cents per 14 oz. can; Dutch 15.9 cents per 14 oz. can. Chocolate milk: Dutch 15 oz. can, 24.7 cents.

There is one commercial manufacture of ice cream using anhydrous milk fat and dry buttermilk from other than United States sources. The price paid for the anhydrous milk fat was approximately 60 cents a pound in 39-pound tins, and for 9 percent fat buttermilk in 60-pound tins approximately 11.2 cents a pound. Malted milkshakes are made using dry whole milk from other than United States source. It was explained to the management that the malted milkshake could be more economically made from recombined milk utilizing their present equipment. The management was anxious to establish closer sources of supply with more frequent deliveries, and requested United States quotations.

The leading exporters of dairy products to British Guiana in 1954 by major products were as follows: (Product listed in accordance with British Guianan custom description).

Product & Source	Pounds
Unsweetened (evaporated)containing not less than 8 percent butterfat	
Canada	36,626
Denmark	600
Netherlands	1,857,358
Unsweetened (evaporated) containing less than 8 percent butterfat	
United Kingdom	96
Canada	3,975
Denmark	522
Netherlands	120,471
Sweetened (condensed) containing not less than 8 percent butterfat	
United Kingdom	441,000
Canada	450,450
Netherlands	2,744,424
Sweetened (condensed) containing less than 8 percent butterfat	
United Kingdom	178,920
Canada	3,150
Netherlands	22,802
Milk and cream (including buttermilk, skim milk and whey), dry in solid form such as blocks and powder - containing not less than 8 percent butterfat	
United Kingdom	38,518
Canada	50,544
Australia	140,540
New Zealand	28,460
Union of South Africa	96
Argentina	450
Belgium	8,854
Denmark	26,788
Italy	19
Netherlands	158,084
Sweden	4,178
United States	525,751

Product & Source	Pounds
Milk and cream (including buttermilk, skim milk and whey), dry in solid form such as blocks and powder - containing less than 8 percent butterfat	
United Kingdom	1,253
Canada	10,001
Australia	40,500
Denmark	300
Netherlands	7,282
United States	47
Venezuela	12
Butter, fresh or salted	
United Kingdom	65,100
Australia	545,889
Ireland	51,900
New Zealand	195,505
Argentina	50
Denmark	551
United States	8
Ghee	
Australia	2,114
Netherlands	10,700
Cheese	
United Kingdom	4,366
Canada	169
Australia	35,392
New Zealand	308,585
Denmark	5,404
Republic of Germany	6
Netherlands	375,422
Norway	808
Switzerland	36
United States	55
Miscellaneous dairy products n.e.s. (ice cream, ice cream powders, malted milk compounds and mixtures, dehydrated products)	
United Kingdom	211,691
Canada	6,714
Australia	27,717
Barbados	4,860
Denmark	85
Netherlands	14,774
United States	748

Import Duties

Product	Rate of Import Duty per pound Preferential 1/	General
Milk and cream (including buttermilk, skim milk, sour milk, sour cream and whey), fresh	5% 2/	10%
Milk and cream (including buttermilk, skim milk and whey), evaporated or condensed (in liquid or semi-solid form)		
Unsweetened (evaporated) containing not less than 8 percent butterfat	2½%	5%
Unsweetened (evaporated containing less than 8 percent butterfat	2½%	5%
Sweetened (condensed) containing not less than 8 percent butterfat	5%	15%
Sweetened (condensed) containing less than 8 percent butterfat	5%	15%
Milk and cream (including buttermilk, skim milk and whey), dry (in solid form, such as blocks and powder)		
Containing not less than 8 percent butterfat	2½%	5%
Containing less than 8 percent butterfat	2½%	5%
Butter, fresh, whether salted or not, including melted -		
Butter, fresh or salted	$4 per 100 lb.	$7.90 per 100 lb.
Ghee	$1.50 per 100 lb.	$2.80 per 100 lb.
Cheese	$4 per 100 lb.	$7.90 per 100 lb.
Miscellaneous dairy products, n.e.s. (ice cream, ice cream powders, malted milk compounds and mixtures, dehydrated products)	20%	36%

1/ Applicable to the United Kingdom, United Kingdom territories, Canada, New Zealand (and territories), Australia (and territories), Union of South Africa, India, Pakistan, Ceylon, South Rhodesia, Irish Republic and Burma.

2/ Percent rate applied to c.i.f. price of item.

PANAMA

The population of Panama City is approximately 177,000. Its milk supply is approximately 25,000 bottles of pasteurized milk a day. It retails for 29 to 30 cents a quart. At this price there is an ample supply, for according to reported information [3] unskilled workers in the province of Panama make approximately $1.66 to $2.30 a day, skilled workers from $3.50 to $3.30 a day, typists $3.30 a day and secretaries $4.50 a day. To reach the mass market it is apparent that milk must retail below its current price.

The Panama Canal Company recently started operating a modern dairy plant, bottling 1,500 gallons of milk per day. Ice cream is manufactured utilizing United States butter and nonfat dry milk solids and United States bulk butter is printed for the retail trade. United States Department of Agriculture stocks are the present source of supply. The plant management explained that the great color variation in United States butter made it necessary to inspect and print separately individual lots so as to eliminate mottled butter. Even with this precaution, color variation from day to day in the printed butter caused complaints from the customers. It is of interest that butter imported from competing countries is of uniform color. The color variation of United States butter is another indication of the necessity for United States export grades for dairy products with specific uniform requirements for each of the product characteristics.

Marketing Situation - Manufactured Dairy Products

Although import figures by country of origin for 1954 in dairy products were not obtained, definite indications of sources of import were noted on the retail markets.

A large United States company represented in Panama was importing other than United States butter in bulk, 56-pound boxes, 45 cents per pound, c.i.f., and printing this butter in 1-pound and $\frac{1}{4}$-pound prints. This was a large volume operation, and the possibility of converting to a United States supply was investigated. The investigation brought out that butter used was of consistently uniform high quality, uniform in color, and contained less salt than United States butter. It was indicated that if United States sources could supply such a product at a competitive price the butter would be purchased on the United States market. This same company was obtaining low-heat, spray dried nonfat in 56-pound tins at a c.i.f. price of 10$\frac{1}{2}$ cents from other than a United States source.

3/ *Facts for Investors in Panama*, the Institute For Economic Development, Republic of Panama, February, 1955.

Nestle-Borden jointly operate a plant manufacturing evaporated and condensed milk at Nata. It was indicated that the issuance of license to import these products had been restricted. Evaporated milk, 14½ oz. can, was retailing for 19 cents. Sweetened condensed milk, 14 oz. can, was selling for 28 cents, 4 oz. can for 9 cents.

It is expected that a locally financed plant to manufacture dry whole milk in the province of Chiriqui will be in operation by September 1. It was reported that it had been unofficially announced that after this date importation of dry whole milk would be greatly reduced and perhaps prohibited. Current retail prices for dry whole milk were: United States, 5-pound tin, 2.89, 1-pound tin, 64 to 84 cents; Dutch, 5-pound tin, $2.65, 1-pound 60 cents; Denmark, 1-pound tin, 74 cents.

Retail prices of cheese observed were: local white cheese, 60 cents a pound; Swiss Gruyere, 227-gram can, 77 cents; Italian Parmesan, $1.10 a pound; United States processed American, 78 cents a pound, Philadelphia cream cheese, 8 oz. 45 cents, special brand processed American, 35 cents a pound, natural cheddar (this cheese apparently not moving from appearance of cheese and package) 8 oz. 35 cents; Danish blue $1.25 a pound, Samsoe and Danbo, 65 cents a pound, Gruyere Processed, 60 cents a pound; Italian Cocatelli, 95 cents a pound.

Retail butter prices were: New Zealand Anchor brand, 65 cents a pound, New Zealand (printed in Panama) 63 cents a pound; Danish foil wrapped, 70 cents a pound, canned, 180 grams, 45 cents canned, 95 grams, 28 cents.

Oleomargarine prices were: United States, 43 and 44 cents a pound.

Import duties

It was unofficially announced recently that import duties on many food items will be increased. It was indicated that on some dairy items the increase would be very significant. The present classification and rates per kilo are:

Whole or skim condensed milk 25 cents; sweetened or nonsweetened evaporated milk, 6 cents to 7 cents; sweetened or nonsweetened evaporated skim milk, 15 cents; dry skim or partially skimmed dry milk for ice cream, 5 cents; dry whole milk, 5 cents; cheese, 5 cents; butter, free but Consular invoice fees of 8 percent.

Possibility for Recombining

There apparently is no prospect of milk recombining in Panama. It would be feasible for the dairy plant of the Panama Canal Company to supplement its normal, high-quality supply. However, it was reported that health regulations for the Canal Zone specify that recombined milk shall be so labeled. The management of the dairy plant was of the opinion that this label would adversely affect consumer acceptance. United States nonfat dry milk solids and butter are used by this plant to manufacture a high-quality, highly acceptable ice cream.

GUATEMALA

Guatemala City has a population between 250,000 and 300,000 with an estimated daily milk supply of 60,000 liters. Of this quantity 6,000 liters is a pasteurized, bottled product produced under good plant operation and procedures. The raw milk sells from 16 to 18 cents a liter and the pasteurized milk for 20 cents.

A company that daily bottles and sells 800 liters of raw milk produced by their own herd, has recently constructed an excellent building and purchased principally United States equipment. The overall capacity is 10,000 liters a day with a potential capacity of 20,000 liters a day by the replacement of a few pieces of equipment. The equipment has not been installed. It was indicated that assistance would be needed to place the plant in operation and that United States investment would be welcome. It appears that there is a substantial, additional demand for high quality, pasteurized, bottled milk in Guatemala City.

It was reported that the average daily wage of unskilled laborers was between 75 cents and $1.50; average daily wage for skilled workers ranged up to $3.50 to $4.00.

It was reported that the government plans to establish a milk sterilizing plant utilizing equipment purchased by the previous administration. The plant could process approximately 40,000 liters a day. It was reported that the milk would retail for approximately 15 cents to 16 cents a liter. To retail at this price it appears that producers' milk would have to be procured for less than the prevailing price paid producers for milk sold as pasteurized, bottled milk.

As in other countries visited, sanitary procedures in the production of milk are not generally followed. There appears to be a tendency to believe that such procedures are of less importance when a sterilizing operation is introduced. It was reported that two sterilizing operations in the Central American area have ceased operations. Products of these operations that were observed were very unsatisfactory.

Marketing Situation - Manufactured Dairy Products

Butter is manufactured locally and sold in 1-pound, parchment-wrapped prints at a retail price of $1.10 a pound. Even at this price it was indicated that more butter could be sold and a request was made for United States butter quotations.

Retail prices of cheese observed were: Dutch, Edam, and Gouda, $1.20 a pound; Danish, blue cheese, $1.40 a pound; Salvador, white cheese, $1.00 a pound; Danish (appeared to be Molbo), $1.20 a pound; Domestic, "Queso de Crema" (a soft fresh cheese) 3/4-pound package, 80 cents, domestic cream cheese, 8 oz. package, 20 cents; United States processed cheese, $\frac{1}{2}$-pound special brand, 60 cents, 5-pound loaves, $3.50 to $4.50 (when cut 80 cents to $1.00 a pound); Swiss processed 227-gram can, 85 cents; Danish 3 oz. and 4$\frac{1}{2}$ oz. processed cheese spread, 50 cents.

Retail prices of dried whole milk observed were: United States (four brands) 5-pound tin, $2.50 to $4.36, 2½-pound tin $1.65 to $2.34, 1-pound tin 60 cents to 98 cents; Dutch (two brands)5 -pound tin $2.50 to $2.75, 2½-pound $1.35, 1-pound tin 60 cents to 65 cents; Denmark (2 brands) 5-pound tin $2.90 to $4.46, 2½-pound tin $1.65 to $2.34, 1-pound tin 60 cents to 98 cents; Canada (one brand) 5-pound $2.00, 1-pound 40 cents.

Retail prices of evaporated milk were: (United States established brand names available but all were of foreign manufacture)Dutch, (three brands) 14½ oz. can, 19 cents to 20 cents, 6 oz. can 10 cents to 12 cents; Canada (one brand) 14½ oz. can, 20 cents, 6 oz. can, 10 cents.

Retail prices of sweetened condensed milk were: Dutch (two brands) 14 oz. can 25 cents, 4 oz. can 10 cents; country of origin not on cans, 396-gram can, 24 cents to 25 cents.

Retail prices, miscellaneous items, United States canned chocolate product (3.18 percent fat - 8.18 percent nonfat) 10 fluid ozs., 20 cents; United States oleomargarine (two brands) 50 cents a pound.

Leading exporters of dairy products to Guatemala in 1954 by major producers are as follows: (Products listed in accordance with Guatemalan custom descriptions).

Product & Source	Pounds
Milk and cream, fresh, pasteurized or sterilized	
United States	3,258
Denmark	423
Milk and cream, dried, powdered, without mixture	
United States	1,540,350
Denmark	381,742
Canada	356,181
Netherlands	152,594
Mexico	8,752
Sweden	20,979
Belgium	11,914
Poland	7,055
Republic of Germany	178
Milk and cream, dried, powdered, mixed with other substances n.e.s.	
United States	372,209
Netherlands	106,718
Mexico	4,231
England	4,877
Australia	7,337
Canada	6,600
Switzerland	917
Republic of Germany	738
Denmark	

Product & Source	Pounds
Milk and cream, evaporated and condensed	
United States	123,083
Netherlands	1,136,617
Sweden	40,732
Canada	15,075
Milk and cream, n.e.s.	
United States	49,564
Netherlands	5,800
Denmark	55
Canada	4
Natural butter from milk, of all kinds, fresh, salted, moulded or in any other form, in containers of all types	
United States	3,664
Denmark	2,570
Netherlands	406
Cheese n.e.s., in packages n.e.s.	
United States	32,430
Italy	23,234
Denmark	16,975
Switzerland	9,943
El Salvador	12,456
Netherlands	4,918
[illegible]	[illegible]
Cheese n.e.s.	
United States	13,501
Switzerland	3,633
Netherlands	4,314
Denmark	988
Italy	366
All others	[illegible]

Import duties

This information was not readily available. A survey of import tariff and restrictions is to be made and will be available in the near future.

Possibilities of Recombining

There is a definite need, and a market, for an additional volume of pasteurized, bottled milk in Guatemala City. It may be possible, until the local milk supply fills the demand, to introduce recombined milk as a supplemental product. It was indicated that such milk might be introduced for specified purposes such as supplying a new large hospital that will soon be in operation. Requests on equipment costs for a definite volume of recombined milk and information on ingredients has been supplied.

Summary

There is a great potential market for milk and dairy products in the countries visited. However, before this potential can be realized the standard of living of the masses will have to be raised, or the domestic retail prices of milk and dairy products lowered. At the time of the survey, milk and dairy products were luxury items priced above the purchasing power of the average worker. Based on United States standards, the per-capita intake of dairy products should be increased to improve the nutritional welfare and general well being of the people. Right prices accompanied by an educational program to further develop the liking for dairy products and an understanding of their nutritive value are essential to increased consumption. However, if this is done, it appears a demand could be developed that the productive capacity for dairying of many of the areas could not supply.

In practically all areas, the demand of the higher income groups for safe, high quality milk and dairy products at existing prices has not been filled. Until this demand is met, there apparently will be little interest in the overall market.

There are opportunities for the introduction of recombined milk in areas where it is not economically sound or feasible to maintain cattle. Several of these opportunities are noted. Theoretically most of the existing markets could beneficially supplement their normal supply with recombined milk and recombined dairy products. There is, however, practically unanimous opposition from vested dairy interests to such introduction. The present opportunities provide only small volume outlets but it would be definitely advantageous to supply these needs and thus establish the value of recombined milk and in so doing remove the opposition that now exists. Imported nonfat dry milk solids are used extensively in the areas where ice cream manufacture is expanding. Vegetable fat is generally the fat ingredient, but, in some areas, anhydrous milk fat is imported. United States suppliers can supply these markets if small quantity shipments are made available at United States Department of Agriculture carlot export prices.

Domestically-manufactured "queso blanca" or white cheese is one of the most extensively used dairy products in the Central and South American areas visited. This domestic cheese is a non-aged product. The principal imported cheeses are of Danish and Dutch origin. Thus a taste for mild cheese has been developed in contrast to the sharp, aged flavor of a natural United States cheddar. There appears to be an opportunity to place cheese on these markets if it is similar in composition, flavor, body and texture to the domestic cheese.

Even at the high retail prices for butter, there appears to be a shortage in some areas at certain times of the year. During the shortage, there is a market for United States butter.

Competitors are endeavoring to enter traditional United States markets for some specific products first introduced by the United States. For example, dry whole milk is offered, in some instances, at prices so low that the retail price can be 11 cents to below that of the United States product. Due to the outstanding sales and promotional work by United States firms this effort has not been successful. Evaporated milk competitors quote prices just below those of the United States. In one case, the price reported was 20 cents to 30 cents per case of 48 cans below the United States price. Unfortunately, this campaign has been effective, due to some extent to the fact that brand names originally established in the United States are now produced in foreign countries and shipped to these markets. In checking prices at retail outlets, the source of manufacture of these brand names was asked and the reply was the United States. However, an inspection of the label disclosed that the product had been manufactured in another country. The store clerks in 3 stores expressed surprise when shown the source of manufacture and stated that they had always associated the name with the United States.

It has been pointed out in previous reports that countries competing with the United States on the world dairy export market have national export brands. It was noted that, with a few exceptions, (such as when trading is done on a previously established United States brand), the product bears some emblem or insignia, in addition to the company brand, to designate the country of origin. For example, many of the Dutch products carry a windmill or a picture of a Dutch child in typical native costume. It is again suggested that it would be advantageous to have United States export grades and a symbol that could be associated with the United States. Neither the grade or the symbol would be detrimental to established brands but would be beneficial to industry. Export grades would assure uniform quality and the symbol would establish in the consumers' mind that such quality is from the United States.

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August 9, 1955

INTERNATIONAL TRADE IN DAIRY PRODUCTS IN 1954

In connection with the publication of these data for the previous year, a statement was made that the world trade picture for dairy products was somewhat clouded inasmuch as the United Kingdom, the largest single importer of dairy products in the world, gave evidence of relying more on local production of dairy products and less on world trade. Furthermore, a recent development at the time of the writing in the cancellation of the bulk dairy contract the United Kingdom had with New Zealand also tended to make the export picture difficult to forecast. Some of these forebodings have been realized since, as shown by the current figures the United Kingdom has cut its imports of dairy products by a very substantial amount. Only in the importation of butter did the United Kingdom stay at its 1953 level. Imports of cheese were down almost 10 percent, or 31 million pounds, under the previous year. Dried milk takings at 26.6 million pounds are almost 20 percent under 1953. Canned milk imports by the United Kingdom have almost disappeared. The slightly more than 8 million pounds received during 1954 are only 11.5 percent of receipts during 1953. Furthermore, these lowered imports are made in spite of the fact that only in butter has the United Kingdom substantially increased its indigenous production.

The effect of the cancellation of New Zealand long-term contract with the United Kingdom in July of 1954 can now be appraised in the light of total export data for the year. In 1954 New Zealand exported 118 million pounds less dairy products than it had in the previous 12 month period. Exports of butter were down 58 million pounds. Cheese exports were 20 million pounds under the previous year. Canned milk shipments were just slightly more than half of 1953 and dried milk was 30 million pounds under the previous year's exports. In the case of all commodities under export, the loss was due primarily to decreased shipments to the United Kingdom.

The impact of sales of United States Government-owned commodities at world export prices and under the provisions of Public Law No. 480 has not as yet been of any considerable impression on world markets. While the United States has increased its exports of butter and cheese, the total amounts have been small; only in exports of nonfat dry milk solids have there been any significant increase and most of this was due to shipments under UNICEF auspices.

World butter exports dropped to about 927 million pounds in 1954, a decline of about 1.5 percent over 1953. The decline in Oceania exports was too large to be overcome by increases registered in other areas. The entire world loss - and more - was borne by New Zealand since Australia showed an increase in shipments of more than 19 million pounds over 1953. New Zealand's decline of 58 million pounds was due primarily to reduced takings by the United Kingdom which substantially cut its imports of the New Zealand products after the mutual termination of the bulk dairy contract on July 31, 1954.

The year was significant in that it found Finland reentering the world export butter market. An importer of butter since the war, Finland found its manufacture of butter more than sufficient for local demand and it exported 7 million pounds. Increased fluid milk consumption is reportedly partially responsible for Finland being in the import column for 1955.

Austria and Ireland also recently reversed their recent status as net importers of butter and became net exporters during 1954. Austria has apparently largely reached its goal of self-sufficiency in dairy products and in 1954 had a surplus of butter for export. Ireland, faced with a surplus situation, subsidized its exports of butter at approximately 9 cents a pound.

Cheese showed no increase in export trade, seemingly content to rest upon the 10 percent gain of 1953 over 1952. The small, but significant, increase in African trade in cheese and the 30.5 million pounds in Europe more or less canceled out the decrease in shipments by Canada and New Zealand. Canadian exports in 1953 were only 5 million pounds compared to more than 16 million pounds a year earlier, while New Zealand's trade was more than 20 million pounds under the 227 million pounds exported during 1953.

Argentina, plagued by unfavorable weather and lowered milk production, showed a decline in exports of butter and cheese during 1954. While the export decline in both cases amounted to approximately 2 million pounds, the relative decline in cheese amounted to almost 25 percent of total export trade in 1953.

Cheese exports, according to data of these specified countries, are more than one-third greater than prewar trade.

Exports of canned milk in 1954 were about 6 percent under 1953 figures on the basis of data from reporting countries. The biggest absolute loss was in Oceania which was down 41 million pounds; this loss is about evenly distributed on a relative basis between Australia and New Zealand with both showing declines of about 40 percent from 1953. Exports from North American countries dropped almost 29 million pounds during 1954. The United States was more than 18 million pounds under its previous year's exports of canned milk, most of the loss being in condensed milk shipments. Canada, losing 10.5 million pounds, had a larger relative loss since this amount represented 57 percent of the previous year's exports.

Europe was the only major area showing an increase in canned milk export trade, the total exports being about 2 percent greater than in 1953. The loss incurred by Ireland and Denmark were more than compensated for by the United Kingdom which jumped from less than 4 million pounds in 1953 to exports of more than 52 million pounds in 1954.

The other areas are only minor factors in canned milk but each showed a gain with Asia rising from 22 thousand to 4.8 million pounds in 1954; however, most of these shipments were re-exports by Hong Kong. The Union of South Africa, which had dropped to only 30 percent of its 1952 trade in 1953, showed an increase in 1954 and regained about 50 percent of its previous year's loss.

The total exports of canned milk were about 13 percent under the 1946 to 1950 period. The largest loss between these periods was registered by the United States which declined from an average of 504 million pounds exported during the immediate postwar period to 133 million pounds in 1954, a loss of almost 75 percent. The Netherlands, on the other hand, has showed an increase of 137 percent during the same period.

In imports of canned milk, the primary change was registered by the United Kingdom which became in 1954 a net exporter of canned milk products after being for many years the world's largest single importer.

Other significant decreases by importing countries were shown by Burma, down to about 24 million pounds from 1953, Belgium, 22 million pounds, and Cuba, 18 million pounds under the previous year's receipts. The loss in these countries was only partially offset by gains shown by Peru, Hong Kong, Indonesia, and the Philippines.

Dried milk trade continued to increase in 1954, adding another 4 percent to the 9 percent gain of 1953 over 1952. At more than 517 million pounds, 1954 exports are about 20 percent above the average for the immediate postwar years.

The United States was the principal gainer, shipping 53.5 million more pounds abroad in 1954 than in 1953. However, the bulk of these exports continued to be shipments for relief purposes from Government stocks under the auspices of the United Nations Children's Funds. The Netherlands showing an increase of almost 7 million pounds over 1953, with total exports of 71 million pounds. Neighboring Belgium also showed a 7.5 percent gain.

Japan, while still a minor factor in world trade, jumped its exports from 0.4 million to 6.6 million in one year. The largest export loss was suffered by New Zealand which showed a decline of almost 30 million pounds in dried milk trade during 1953. Its loss may be even greater during 1955 in view of that country's recently announced policy of concentrating on casein production. Canada's exports declined by about one-third to less than 25 million pounds. Australia and Ireland both lost approximately 2 million pounds in export trade but Ireland's was the more severe loss since it represented a decline of almost 60 percent. The United Kingdom reduced its imports of dry milk by more than 26 million pounds, a decline of about one-fifth.

As was the case last year, the export picture for the last half of the year, appears clouded since the bulk dairy contracts that Australia and Denmark had with the United Kingdom have expired or will expire shortly. The 3 former bulk suppliers, New Zealand, Australia, and Denmark, have joined together to advertise and promote dairy products, specifically their dairy products, on the United Kingdom market where, since the end of rationing, dairy products have had stiff competition from dairy substitutes, particularly margarine. Furthermore, countries not heretofore factors in export trade in certain dairy products may exert unexpected influence in 1955. France, for instance, has allocated approximately $14 million to be used for dairy export subsidies; butter exports by France during the first 6 months of 1955 are reported at 11.3 million pounds compared to 6.2 million pounds exported during the entire year in 1954.

A summary of this information was published in the August 8, 1955 issue of Foreign Crops and Markets.

BUTTER: International Trade in specified countries, Averages 1934-38, 1946-50, Annual 1953 and 1954, Preliminary

Continent and Country	Averages				1953		1954	
	1934-38		1946-50					
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
NORTH AMERICA								
Canada	1/ 6,643	1/ 1,114	2,239	4,134	191	5	143	3
Mexico	2/	1/ 172	2/	205	—	348	—	345
Panama, Republic of	—	1,799	—	3/ 1,275	—	1,449	—	816
United States	1,152	9,307	4,982	2,258	362	126	3,343	962
Cuba	4/ 610	4/ 23	2/	946	—	566	—	288
Netherlands Antilles	—	452	—	3/ 1,500	—	5/ 1,400	—	5/ 1,450
Trinidad and Tobago	—	1,788	—	1,500	—	5/ 800	—	5/ 10
SOUTH AMERICA								
Argentina	18,823	64	21,562	—	35,578	—	33,737	—
Brazil	9	—	4/ 7	—	—	225	—	6/ 11
Chile	36	64	—	4/ 556	—	5/ 1,100	—	5/ 2,435
Colombia	2	1/ 38	2/	4/ 41	—	5/ 20	—	5/ 5
Peru	2/	311	—	4/ 718	—	5/ 1,200	—	3,440
Venezuela	—	798	—	4/ 5,340	—	2,085	—	2,734
EUROPE								
Austria	5,980	73	2/	4/ 374	—	250	5,609	344
Belgium	68	9,930	463	44,948	—	28,694	9	17,304
Czechoslovakia	754	1,918	—	4/ 5,681	7/	7/	7/	5/ 19,640
Denmark	328,573	37	245,978	—	299,143	—	307,932	—
Finland	8/ 24,467	8/ 13	—	6,916	—	3,089	7,072	—
France	8,932	3,640	5,211	25,504	3,283	42,468	6,210	2,970
Germany, Western	—	9/ 203,465	—	4/ 53,629	—	19,074	—	29,312
Greece	2/	860	—	498	—	512	—	2,208
Hungary	9,118	—	7/	7/	7/	7/	7/	7/
Ireland	51,843	448	3/ 2,851	2/	644	10,495	7,532	1,120
Italy	1,067	2,249	3/ 158	3/ 7,269	31	21,067	44	14,197
Netherlands	109,587	356	62,921	310	116,226	18	114,685	22
Norway	726	2	2,691	3/ 894	11,378	—	3,317	2/
Poland	18,665	2	4/	4/	7/	7/	7/	7/
Portugal	141	229	4/ 521	1,774	895	—	1,658	—
Rumania	217	—	7/	7/	7/	7/	7/	7/
Spain	4/ 21	4/ 111	7/	7/	—	—	—	—
Sweden	50,547	353	7,051	4/ 833	29,696	—	28,863	—
Switzerland	7	2,033	321	21,590	2	13,076	2	4,429
United Kingdom	1,367	1,074,727	—	606,317	—	631,444	—	632,385
Yugoslavia	282	2/	4/ 35	10/ 55	7/	7/	7/	7/
U.S.S.R. (Europe & Asia)	46,486	401	7/	7/	7/	7/	7/	6/ 65,370
ASIA								
British Malaya 11/	571	4,078	—	3/ 2,600	—	3,576	—	12/ 2,614
Ceylon 11/	—	963	—	3/ 1,723	—	2,132	—	1,802
India 11/	4,142	6,175	—	4/ 921	—	1,385	—	13/ 760
Indonesia 11/	—	12,352	—	3/ 800	—	100	—	5/ 150
Israel	—	4,826	—	3/ 200	—	6,165	—	19,037
Japan	562	141	—	3/ 300	7	4,577	7/	5/ 3,946
Philippines, Republic of	—	1,566	—	4/ 1,609	—	1,422	—	835
AFRICA								
Algeria	12	4,337	—	4/ 4,357	—	8,023	—	9,374
Belgian Congo 11/	13	800	—	3/ 900	—	2,100	—	13/ 2,760
Egypt 11/ 14/ 15/	119	1,140	3/ 54	3/ 1,500	15/ 55	800	—	1,025
Southern Rhodesia	289	116	51	863	76	2,413	—	5/ 1,597
Union of South Africa	15/ 6,192	15/ 3,291	396	7,139	302	4,685	2,864	6/ 4,233
OCEANIA								
Australia	220,151	2	164,318	—	87,460	—	106,817	—
New Zealand	308,895	2	291,200	—	355,086	—	297,123	—

1/ Average for 1935-39. 2/ Less than 500 pounds. 3/ For 1950. 4/ Less than a 5-year average. 5/ Based on incomplete data or exports by country of destination, as reported by major supplying countries. 6/ January - October only. 7/ Not available. 8/ For 1934. 9/ For 1937. 10/ For 1948. 11/ Includes ghee. 12/ January - August only. 13/ January - November only. 14/ Does not include trade with Anglo-Egyptian Sudan. 15/ Year ending August 31.

Foreign Agricultural Service. Prepared or estimated from official statistics, reports of Agricultural Attaches and other information.
August 8, 1955.

CHEESE: International Trade in Specified Countries, Averages 1934-38, 1946-50, Annual 1953 and 1954, Preliminary

Continent and Country	Averages 1934-38 Exports	Averages 1934-38 Imports	Averages 1946-50 Exports	Averages 1946-50 Imports	1953 Exports	1953 Imports	1954 Exports	1954 Imports
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
NORTH AMERICA								
Canada	1/ 79,700	1/ 1,342	63,530	3,176	16,429	5,219	5,006	5,943
Mexico	15	895	164	858	8	1,965	10	1,494
Panama, Republic of	—	348	—	2/ 700	—	663	—	334
United States	1,260	54,279	99,706	28,874	5,912	56,215	5,378	49,958
Cuba	13	3/ 428	—	629	—	1,812	—	2,453
Netherlands Antilles	2	611	—	2/ 1,100	—	4/ 1,200	—	4/ 1,215
Trinidad and Tobago	—	600	—	2/ 1,400	—	4/ 700	—	4/ 855
SOUTH AMERICA								
Argentina	3,406	110	25,258	—	9,783	—	7,418	—
Brazil	4	362	5/ 2	3/ 1,332	—	6/	—	7/ 81
Chile	62	48	—	3/ 15	—	6/	—	4/ 25
Colombia	2	37	—	3/ 10	—	4/ 1	—	4/ 15
Peru	—	688	—	3/ 404	—	4/ 800	—	1,254
Venezuela	13	1,235	—	3/ 7,105	—	8,847	—	10,541
EUROPE								
Austria	6,720	1,818	3/ 1,675	3/ 1	3,377	1,876	6,991	3,302
Belgium	344	50,563	3/ 1,182	59,937	798	71,423	641	75,155
Bulgaria	3,554	8/	9/	9/	9/	9/	9/	9/
Czechoslovakia	1,909	2,706	3/ 831	3/ 518	9/	9/	9/	4/ 4,770
Denmark	18,067	33	46,558	31	131,808	569	131,023	1,493
Finland	11,651	31	5,732	—	23,810	—	24,910	—
France	25,039	30,867	23,948	23,485	36,753	18,831	41,063	18,772
Germany, Western	—	3/ 22,000	3/ 4,940	3/ 72,754	8,439	117,712	13,203	128,985
Greece	621	800	—	7,665	—	6,538	—	8,178
Hungary	862	15	9/	9/	9/	9/	9/	9/
Ireland	1,509	60	3/ 2,008	3/ 104	1,289	—	496	712
Italy	53,219	9,669	18,074	8,372	37,587	47,756	37,703	51,524
Malta and Gozo	—	1,647	—	3/ 2,400	—	4/ 600	—	4/ 1,755
Netherlands	132,358	934	75,467	1,086	189,697	584	203,008	697
Norway	4,111	338	712	648	5,646	516	3,353	735
Poland	1,360	317	9/	9/	9/	9/	9/	9/
Portugal	143	386	3/ 722	3/ 13	1,042	50	1,126	69
Rumania	139	90	9/	9/	9/	9/	9/	9/
Spain	3/ 117	3/ 2,502	—	3/ 13	10	868	6	1,669
Sweden	625	2,473	4,453	5,239	10,348	5,778	10,379	10,397
Switzerland	41,678	3,924	18,011	3/ 3,445	40,325	5,806	47,496	6,239
United Kingdom	2,987	319,028	—	411,820	—	327,076	—	295,698
Yugoslavia	4,169	55	2/ 26	—	9/	9/	9/	9/
U.S.S.R (Europe & Asia)	84	816	3/	3/	9/	9/	9/	5/ 9,975
ASIA								
British Malaya	22	313	—	3/ 569	—	833	—	10/ 610
Ceylon	—	220	—	2/ 500	—	674	—	436
Cyprus	666	88	9/	9/	1,156	398	704	9/
India	4	1,204	—	3/ 848	—	1,152	—	11/ 742
Israel	33	2,138	—	2/ 4,000	—	3/	—	7,762
Japan	—	159	—	2/ 200	—	2,463	—	4/ 328
Philippines, Republic of	—	895	—	1,557	—	2,303	—	4/ 5,205
Syria and Lebanon	553	917	3/ 34	3/ 8,702	—	4/ 1,600	—	4/ 1,685
AFRICA								
Algeria	82	10,833	—	2/ 18,000	—	22,887	—	24,080
Belgain Congo	4	337	—	2/ 500	—	4/ 950	—	4/ 1,751
Egypt 12/	3/ 82	3/ 7,269	3/ 84	3/ 9,000	13/ 183	4/ 7,200	9/	4/ 6,795
Southern Rhodesia	80	64	80	159	87	76	9/	4/ 195
Union of South Africa	14/ 1,465	14/ 496	197	145	196	587	3,257	494
OCEANIA								
Australia	21,750	104	50,185	175	51,635	—	52,546	—
New Zealand	194,000	2	193,653	—	227,024	—	206,835	—

1/ Average 1935-39. 2/ For 1950. 3/ Less than a 5-year average. 4/ Based on incomplete data or exports by country of destination, as reported by major supplying countries. 5/ For 1946. 6/ Incomplete. 7/ January - October only. 8/ Less than 500 pounds 9/ Not available. 10/ January - August only. 11/ January - November only. 12/ Does not include trade with Anglo-Egyptian Sudan. 13/ Estimated. 14/ Years ending August 31.

Foreign Agricultural Service. Prepared or estimated from official statistics, reports of Agricultural Attaches and other information.
August 8, 1955

CANNED MILK (Condensed and Evaporated): International Trade in Specified Countries, Averages 1934-38, 1946-50, Annual 1953 and 1954, Preliminary

Continent and Country	Averages 1934-38 Exports	Averages 1934-38 Imports	Averages 1946-50 Exports	Averages 1946-50 Imports	1953 Exports	1953 Imports	1954 Exports	1954 Imports
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
NORTH AMERICA								
Canada	1/ 19,755	1/ 25	50,552	34	18,582	22	8,051	35
Mexico	—	1/ 614	2/ 3	2/ 1,464	10	10,834	3/ 38	4/ 340
Panama, Republic of	—	4,327	—	5/ 3,700	—	1,150	—	3
United States	33,837	452	504,310	211	151,224	472	132,830	60
Cuba	6/ 17	4,691	2/ 5	30,780	—	44,466	—	28,213
Netherlands Antilles	—	3,060	—	5/ 6,000	—	4/ 5,500	—	4/ 5,880
SOUTH AMERICA								
Argentina	46	311	2/ 1,089	—	292	—	7/ 494	—
Brazil	8/ 4	—	2/ 90	—	9/	9/	9/	9/
Peru	—	3/ 7,833	—	5/ 14,954	—	4/ 9,400	—	14,850
EUROPE								
Austria	3/ 428	3/ 406	2/ 5	2/ 597	—	135	—	8
Belgium	2,202	4,255	2/ 498	2/ 67,487	439	44,758	597	22,624
Czechoslovakia	8/ 1	8/ 307	2/ 6	2/ 265	9/	9/	9/	9/
Denmark	40,439	—	58,941	10/ 44	91,513	—	65,082	—
France	3/ 11,277	2,955	20,168	28,952	29,147	1,582	31,975	1,774
Germany, Western	9/	9/	5/ 272	5/ 8,881	3/ 3,278	3/ 3,805	1,052	337
Greece	—	4,309	—	2/ 63,532	—	18,735	—	19,117
Ireland	2/ 12,936	2/ 60	17,781	—	13,100	—	2,740	—
Italy	3/ 3,301	344	2/ 800	2/ 32,116	75	3,245	82	661
Netherlands	356,087	77	194,670	5/ 148	457,802	483	461,544	46
Norway	4,667	67	113	6	3/ 1,712	—	406	—
Spain	11/ 26	11/ 28	—	17	2,131	327	10	915
Sweden	8/ 115	9/ 18	1,620	2/ 5,485	3,747	—	2,103	2
Switzerland	12,987	9	4,448	4,585	9,041	3,599	10,612	3,827
United Kingdom	36,002	199,204	8,332	121,455	3,659	71,299	52,169	8,202
ASIA								
British Malaya	9,000	74,000	—	5/ 66,000	—	2,794	—	12/ 2,510
Burma	—	8/ 19,945	—	2/ 17,449	—	28,738	—	4,795
Ceylon	—	9/	—	5/ 8,700	—	3/ 12,703	—	3/ 14,223
Hong Kong	—	9/	—	5/ 24,000	—	4/ 7,300	4,183	17,413
India	—	8/ 6,440	—	16,863	—	12,199	—	13/ 7,772
Indonesia	—	6/	—	5/ 47,000	—	4/ 18,000	—	4/ 22,390
Israel	—	2,000	—	5/ 1,200	—	139	—	273
Japan	3/ 9,800	3/ 1,300	—	5/ 2,600	22	1,775	4/ 654	4/ 74
Pakistan	—	6/	—	5/ 7,200	—	4/ 1,800	—	4/ 497
Philippines, Republic of	—	40,643	—	75,642	—	124,309	—	4/ 131,375
Thailand	—	21,731	—	5/ 37,000	—	64,066	—	60,640
AFRICA								
Algeria	—	3/ 5,900	—	5/ 9,300	—	17,198	—	4/ 12,541
Belgian Congo	—	9/	—	5/ 1,300	—	4/ 3,300	—	13/ 3,614
Egypt	—	6/ 96	—	5/ 2,700	—	2,077	—	4/ 3,280
Gold Coast	—	9/	—	5/ 6,300	—	4/ 7,000	—	4/ 8,670
Union of South Africa	—	3,105	513	2/ 2,786	1,226	1,382	2,726	648
OCEANIA								
Australia	15,392	—	70,748	2/ 2	75,281	—	43,833	—
New Zealand	6,156	—	20,348	—	23,549	—	13,222	—

1/ Average for 1935-39. 2/ Less than a 5-year average. 3/ Includes dried milk. 4/ Based on incomplete data or exports by country of destination, as reported by major supplying countries. 5/ For 1950. 6/ For 1939. 7/ January - August only. 8/ For 1938. 9/ Not available. 10/ For 1946. 11/ For 1935. 12/ January - September only. 13/ January - November only.

Foreign Agricultural Service. Prepared or estimated from official statistics, reports of Agricultural Attaches and other information.
August 8, 1955.

DRIED MILK (Whole and Skimmed): International Trade in specified countries, Averages 1934-38, 1946-50, Annual 1953 and 1954, Preliminary

Continent and Country	Averages				1953		1954	
	1934-38		1946-50					
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
NORTH AMERICA								
Canada	1/ 5,580	1/ 431	24,357	4,791	37,422	120	24,688	81
Mexico	—	466	—	10,962	2/	19,103	2/	6,426
Panama Republic of	—	305	—	3/ 2,000	—	4/	—	4/
United States	4,804	6,055	280,041	2,176	144,168	6,301	197,707	719
Cuba	—	5/	6/ 2	6/ 2,066	—	7/ 1,000	—	614
Netherlands Antilles	—	4/	—	3/ 1,100	—	7/ 1,500	—	7/ 1,415
SOUTH AMERICA								
Argentina	1/ 97	—	6/ 2,452	—	4/	4/	4/	4/
Brazil	8/ 2	8/ 172	—	6/ 3,481	—	6,094	—	9/ 3,558
Peru	—	2/	—	6/ 684	—	7/ 1,300	—	663
Venezuela	—	10/ 1,807	—	6/10/45,622	—	74,753	—	10/ 72,208
EUROPE								
Austria	2/	2/	3/ 9	6/ 1,255	—	99	—	7
Belgium	11/ 41	11/ 7,741	6/ 851	6/ 12,988	19,709	19,491	21,195	19,802
Czechoslovakia	—	154	4/	4/	4/	4/	4/	4/
Denmark	594	—	9,782	6/ 478	25,151	65	25,593	20
France	2/	2,168	1,847	26,279	4,337	9,815	4,594	4,365
Germany, Western	4/	4/	3/ 19,851	3/ 8,057	3,248	2/	3,851	6,519
Greece	—	209	—	6/ 26,894	—	2,282	—	1,701
Ireland	627	213	2,935	454	4,062	10,579	1,723	—
Netherlands	37,223	111	6/ 33,524	6/ 8,276	64,491	7,011	71,398	8,161
Norway	10	90	35	115	2/	17	1	5/
Spain	12/ 14	12/ 375	—	1,152	2	13	1	64
Sweden	—	8/ 864	9,758	—	9,206	—	5,168	—
Switzerland 13/	14/ 3,036	—	6/ 2,260	3,927	7,792	5,522	7,630	3,302
United Kingdom	—	30,859	6/ 1,963	6/ 63,388	5,075	134,645	6,633	108,022
ASIA								
British Malaya	—	643	—	6/ 3,766	—	3,435	—	15/ 2,742
Burma	—	4/	—	3/ 1,000	—	254	—	7/ 104
Ceylon	—	4/	—	3/ 2,300	—	2/	—	2/
Hong Kong	—	4/	—	3/ 2,200	—	7/ 1,700	881	3,765
India	—	1,525	—	6/ 16,665	—	36,268	—	16/ 38,585
Indonesia	—	4/	—	3/ 6,500	—	7/ 3,000	—	2,870
Israel	—	1,268	—	3/ 16,000	—	26,843	—	29,738
Japan	2/	2/	—	3/ 62,000	371	3,997	6,592	7/ 3
Philippines, Republic of	—	1/ 735	—	3,988	—	5,830	—	5,325
Thailand	—	4/	—	3/ 4,600	—	1,461	—	1,458
AFRICA								
Belgian Congo	—	4/	—	3/ 2,300	—	7/ 3,000	—	16/ 4,063
Egypt	—	8/ 38	—	3/ 2,082	—	1,922	—	7/ 3,650
Union of South Africa	8/ 7	8/ 724	6/ 149	1,071	204	829	379	16
OCEANIA								
Australia	3,324	299	22,558	6/ 141	57,119	—	55,177	—
New Zealand	16,111	—	41,698	—	117,550	—	87,785	—

1/ Average for 1935-39. 2/ Included with canned milk. 3/ For 1950. 4/ Not available. 5/ Less than 500 pounds. 6/ Less than a 5-year average. 7/ Based on incomplete data or exports by country of destination as reported by major supplying countries. 8/ For 1938. 9/ For 10 months. 10/ Includes canned milk. 11/ Average for 1937-39. 12/ For 1935. 13/ Includes infant foods. 14/ For 1939. 15/ Incomplete. 16/ For 11 months.

Foreign Agricultural Service. Prepared or estimated from official statistics, reports of Agricultural Attaches and other information.
August 8, 1955.

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FD 7-55 July 12, 1955

WORLD OUTPUT OF DAIRY PRODUCTS, FIRST QUARTER, 1955

Over-all factory output of dairy products declined in the first quarter 1955 compared with the corresponding quarter of 1954. Of the four major dairy products produced in factories, only canned milk rose above the 1954 level.

In the Southern Hemisphere, conditions were favorable for milk production in the January-March quarter. Weather conditions were excellent in Australia and milk production was higher than a year ago. In New Zealand warm, dry conditions early in the quarter were followed by generally widespread rains which greatly benefited pastures in the principal dairy districts.

Milk production was down in many countries of Western Europe. In Denmark, production declined, due to a lower yield per cow, attributed to smaller supplies and poorer qualities of domestically produced roughage and reduced feeding of imported protein supplements. The reduced milk production in the Netherlands resulted from unfavorable weather and a smaller fodder crop. The relatively high price of grains and cakes curtailed their liberal use in this period. Other countries in which cold weather affected milk production in the first quarter were Western Germany, Ireland and the United Kingdom.

Cool weather in Canada held milk production at approximately the 1954 level. In the United States, cow numbers were smaller than a year ago, and milk production was down.

Factory butter production in the first quarter of 1955 dropped 6 percent below the corresponding quarter of 1954. In Australia, the quantity of milk used for butter was considerably higher than a year ago. Supplies for butter manufacturing were also larger in New Zealand, and butter production showed a marked increase over comparable 1954.

Smaller deliveries and less favorable butter/oilcake price ratio contributed to lower butter output in Denmark. Because of a reduction in milk production ascribed to the low quality of feeds, butter production in Finland declined. In the Netherlands, lower milk production resulted in lower deliveries, and butter production dropped sharply during the first quarter. More milk was used for fluid consumption in Western Germany; with smaller quantities available for manufacturing, butter production was down. Milk receipts at creameries were smaller also in Ireland and Sweden, and butter production was below the 1954 level.

FACTORY DAIRY PRODUCTS: Output in principal producing and exporting countries, 1st quarter (calendar) 1955, with comparisons

Country and Product	Average		Total 1954	1954				1955	First Quarter 1955/1954
	1934-38	1946-50		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	Percent
BUTTER									
Canada	1/ 254,774	277,868	312,854	35,425	104,228	117,827	55,374	34,316	97
United States	1,705,240	1,301,830	1,449,180	378,575	467,330	331,640	271,635	328,030	87
Belgium	46,179	55,353	97,779	16,938	29,209	31,612	20,020	-	-
Denmark	400,660	318,697	397,710	87,743	120,150	2/ 108,908	2/ 80,909	78,263	89
Finland	61,287	3/ 61,215	112,496	23,424	34,731	33,206	21,135	21,363	91
France 4/	529,000	390,471	5/ 650,000	-	-	-	-	-	-
Germany, Western	6/7/ 560,000	3/ 492,188	2/ 668,329	148,616	194,492	2/ 186,664	2/ 138,557	135,296	91
Ireland	89,400	68,648	88,005	4,886	30,707	38,042	14,370	3.977	81
Netherlands	201,000	155,620	2/ 179,662	2/ 29,762	52,714	57,719	2/ 39,467	25,751	86
Norway	24,930	20,049	22,884	4,153	9,002	6,887	2,842	4,651	112
Sweden	152,769	216,442	2/ 204,095	2/ 41,308	60,942	62,949	38,896	37,805	92
Switzerland 4/	57,760	36,949	8/ 65,036	15,488	20,209	16,909	10,148	-	-
United Kingdom	44,200	23,529	51,520	11,021	2/ 21,191	13,709	2/ 5,599	-	-
Argentina	65,742	100,657	114,639	-	-	-	-	-	-
Union of So. Africa	9/ 27,725	44,845	75,614	2/ 23,421	16,447	2/ 14,420	21,326	-	-
Australia	7/ 415,250	354,371	2/ 402,257	2/ 107,374	57,985	76,474	2/ 160,424	118,684	110
New Zealand - Total	7/ 366,912	346,095	2/ 409,137	2/ 111,754	37,878	80,954	2/ 178,551	124,231	111
Export gradings	10/ 322,796	301,826	330,511	91,143	23,636	61,994	153,738	102,363	112
CHEESE									
Canada	1/ 119,924	114,329	84,436	7,040	27,968	34,798	14,630	6,123	87
United States	643,234	1,156,005	1,353,500	322,000	445,340	328,570	257,590	294,635	92
Denmark	68,820	123,634	2/ 179,235	34,172	59,524	2/ 51,588	2/ 33,951	37,919	111
France 11/	5/ 584,000	12/ 424,070	5/ 730,000	-	-	-	-	-	-
Italy 11/	523,513	491,326	2/ 741,848	-	-	-	-	-	-
Netherlands	5/ 200,000	176,926	2/ 326,503	2/ 50,086	94,514	100,362	2/ 81,541	51,800	103
Norway 13/	39,067	35,564	2/ 65,792	2/ 12,916	23,665	19,465	2/ 9,746	13,303	103
Sweden	76,059	115,005	121,845	23,400	41,469	37,539	19,437	21,032	90
Switzerland 13/	111,729	107,232	8/ 120,592	16,034	32,935	40,615	22,308	-	-
United Kingdom 4/	109,000	69,888	2/ 182,776	2/ 55,328	2/ 72,128	2/ 32,480	22,840	-	-
Argentina	67,873	203,830	198,414	-	-	-	-	-	-
Union of South Africa	9/ 10,195	17,967	30,778	9,066	5,771	6,264	9,677	-	-
Australia	7/ 48,400	98,396	2/ 107,233	2/ 26,434	11,874	2/ 25,951	2/ 42,974	20,747	78
New Zealand - Total	7/ 210,911	216,842	2/ 236,970	2/ 71,725	22,938	39,558	2/ 102,749	67,200	94
Export gradings	10/ 204,110	205,962	228,300	74,675	30,296	23,347	99,982	70,856	95

CANNED MILK									
Canada 14/	1/ 104,335	266,532	2/ 307,536	48,864	2/ 109,353	95,518	53,801	50,623	104
United States 15/	1,970,189	3,170,576	2,564,210	522,225	872,770	698,950	470,265	576,900	110
Cuba	16/ 32,564	36,655	56,196	7,686	11,340	20,076	17,094	-	-
Denmark	40,785	58,701	-	-	-	-	-	-	-
France	17/ 28,953	16/ 57,984	-	-	-	-	-	-	-
Netherlands	309,952	181,222	2/ 511,250	2/ 97,787	133,211	132,364	2/ 147,888	112,399	115
Switzerland	14,198	13,031	-	-	-	-	-	-	-
United Kingdom	378,560	219,914	258,496	2/ 16,576	2/ 133,056	2/ 55,776	53,088	-	-
Argentina	18/ 3,159	16/ 11,914	-	-	-	-	-	-	-
Australia	7/ 41,894	132,745	2/ 115,522	2/ 31,585	14,988	22,301	2/ 46,648	27,520	87
New Zealand	16/ 11,273	-	-	-	-	-	-	-	-
DRIED MILK 19/									
Canada	1/ 26,079	70,876	2/ 100,278	2/ 14,723	2/ 34,907	33,887	16,761	13,134	89
United States	16/ 203,555	913,436	1,379,025	366,220	492,335	284,230	236,240	319,600	[illegible]
Belgium	5,500	6,607	34,513	4,766	14,046	11,821	3,880	-	-
Denmark	2,205	16,866	-	-	-	-	-	-	-
France	17/ 7,685	16/ 3,308	-	-	-	-	-	-	-
Netherlands	56,438	54,468	2/ 130,673	2/ 12,985	49,041	54,552	2/ 14,095	10,318	79
Sweden	1,351	24,566	25,862	4,071	9,665	8,503	3,623	-	-
Switzerland	7,187	10,847	-	-	-	-	-	-	-
United Kingdom	43,098	73,848	110,432	2/ 24,640	2/ 47,712	2/ 20,832	17,248	-	-
Argentina	18/ 3,977	16/ 14,070	-	-	-	-	-	-	-
Australia	7/ 16,971	54,235	2/ 85,452	2/ 23,841	8,637	17,109	2/ 35,865	21,927	92
New Zealand	20/ 17,429	-	-	-	-	-	-	-	-

1/ Average 1935-39. 2/ Revised. 3/ Average 1948-50. 4/ Total production. 5/ Estimated. 6/ Average 1935-38. 7/ Production year ending June 30. 8/ Annual production figures more complete than monthly figures used in quarterly data. 9/ Production year ending August 31. 10/ Marketing year ending July 31. 11/ Total cheese, and includes cheese made from the milk of sheep and goats. 12/ For 1948. 13/ Total cheese, and includes cheese made from the milk of goats. 14/ Both bulk and case goods. 15/ Evaporated whole and condensed whole case goods only. (Estimates of production of bulk types discontinued). 16/ Less than a 5-year average. 17/ For 1937. 18/ For 1939. 19/ Total dried whole milk and dried skim milk for human consumption. 20/ For 1938.

Foreign Agricultural Service. Prepared or estimated from official statistics, reports of Agricultural Attaches and other U.S. Representatives abroad and other information. July 14, 1955.

In both Canada and the United States, liquid consumption continued high, so that less milk was available for manufacturing in this quarter than a year ago.

Cheese production declined 6 percent in the opening quarter of 1955 compared with a year earlier. Australian output dropped sharply, reflecting the change from cheese to butter as a result of lower returns for cheese on the United Kingdom market. Production also was down in New Zealand.

In the Netherlands, the continuance of a favorable cheese market encouraged production. An improvement in prices in Denmark stimulated output that was considerably above the 1954 level.

Production in both Canada and the United States showed sharp declines in each month of the quarter, due to changes in utilization.

Output of canned milk (condensed and evaporated)in the first quarter of 1955 rose 10 percent over first quarter 1954. The largest gain was made in the Netherlands, due to a continuing market demand for this product. Substantial increases in canned milk manufacture also occurred in Canada and the United States.

Dried milk production in the first three months of 1955 dropped to 87 percent of the same three months of the preceding year. Over-all output in Australia was down, although production of nonfat dry milk solids was up, compared with 1954. In the Netherlands, total dried milk production declined, due to a sharp drop in the manufacture of nonfat dry milk solids. Total output of dried milk in both Canada and the United States was down in this quarter.

Current Conditions Abroad

Australia: - Wet conditions experienced in most dairying districts at the beginning of the second quarter greatly benefited pastures.

New Zealand: - Prospects are generally favorable for winter production. Stock are expected to winter well.

Denmark: - It seems very probable that milk production in the second quarter will be below 1954. Milk cow numbers are down, due to farmers culling their herds because of scarce supplies of feed and weakening incomes from dairying. Also, grazing in the second quarter was hampered by cold weather.

The Netherlands: - Pasture conditions appear to be very good and cow numbers show a slight increase.

Canada: - Weather conditions this spring are better than a year ago. Pastures are good. -- By Regina M. Murray, based in part upon reports of Agricultural Attaches and other U. S. representatives abroad.

A summary of this information was published in the July 11, 1955 issue of Foreign Crops and Markets.

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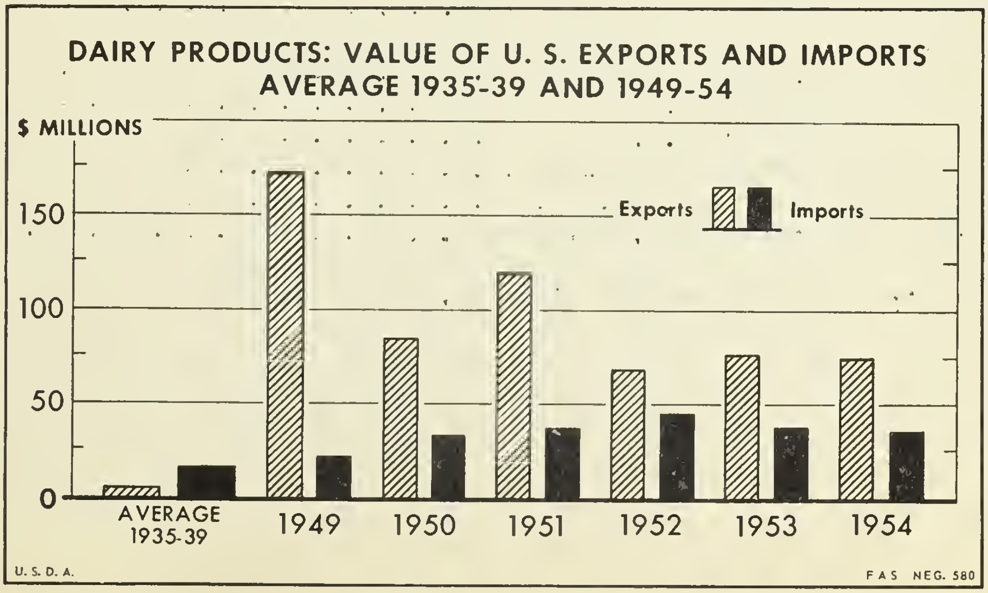
UNITED STATES TRADE IN DAIRY PRODUCTS AVERAGE 1935-39 AND ANNUALLY 1950-54

SUMMARY

The export trade of the United States in dairy products continued to increase on a weight and milk equivalent basis but with a reduced level of value. Both the total weight of exports, without regard to product, and the whole milk equivalent of exports were greater in 1954 than in 1953. The whole milk equivalent of exports at more than 2 billion pounds was almost 50 percent above 1953. Export movement, however, in terms of dollar value was down. 1954 exports were valued at only $81.3 million against $82.5 million in 1953. The fact is that the increased movement of commodities at decreased value represents in some measure the efforts of the Government to reduce its stocks of dairy products by moving them into world trade through reduced prices at or near world levels for commercial purposes, through the medium of counterpart currency arrangements under Public Law 480, which was enacted in 1954, and by non-commercial negotiated sales.

The value of imports dropped for the second consecutive year. The total value of all dairy products imports by the United States amounted to $36.0 million during 1954. This is $2.3 million under the value of imports in 1953 and $9.4 million under 1952. In terms of whole milk equivalent, the imports during 1954 at 502 million pounds was 86 million pounds under 1953.


DAIRY PRODUCTS: VALUE OF U. S. EXPORTS AND IMPORTS AVERAGE 1935-39 AND 1949-54

CONTENTS

Page

Summary 1
Background. 3
Exports 3
Imports 4
Shipments of Dairy Products to Territories & Possessions, 1940-1954. . 5
Whole Milk Equivalent of United States Trade in Milk, Cream and Dairy Products in Relation to Production 1935-1954. 5
United States Trade in Milk and Dairy Products in terms of Whole Milk Equivalent, 1935-1954 6
Exports and Imports of principal dairy products, United States, 1920-54 7
Total Imports of Milk, Cream and Dairy Products, average 1935-39, Annual 1950-1954:
  Quantity. 8
  Value 9
Total Exports of Milk, Cream and Dairy Products, average 1935-39 annual 1950-54:
  Quantity. 10
  Value 11
Import Controls 12
Status of Imports of Dairy Products under Section 22. 13
Imports by Country of Origin, average 1935-39, annual 1950-1954:
  Butter. 14
  Cheese:
    All cheese. 15
    Cheddar, Swiss and Romano 16
    Pecorino, Reggiano, Parmesan, Provolone and Roquefort 17
    Blue Mold, Edam and Gouda, and Sbrinz 18
    Other 19
  Processed Milk:
    Dried Whole, Dried Skimmed, Dried Buttermilk and Dried Cream. . . 20
  Casein. 21
Exports by Country of Destination, average 1935-39, annual 1950-1954:
  Evaporated Milk, Condensed Milk 22
  Dried Whole Milk, Nonfat Dry Milk 23
  Butter. 24
  Cheese:
    All cheese. 25
    Cheddar (Natural) 27
    Processed Cheddar 28
  Malted Milk Compounds and Mixes 29
  Ice Cream Powder Mix. 31
  Infant and Dietetic Food, Milk Base 32

Prepared by Dairy and Poultry Division, FAS, July 1955

Background

Foreign trade in dairy products by the United States has historically amounted to only a small part of the domestic production, ordinarily less than 1 percent, on an equivalent basis, of the annual production of milk. Exceptions to this pattern are found in the two war periods during and following World War I and World War II when large quantities of dairy products, particularly cheese and processed milks, were moved abroad. However, even at the peak of the war movements, which occurred in 1944, only 5.6 percent of the total domestic production went into export channels.

During World War II, with most of the normal channels of trade denied to commercial exporters, the bulk of the movement of United States exports was under Government programs such as Lend-Lease; in 1944 almost 97 percent of all exports, in terms of milk equivalent, was shipped under Government programs. After the surrender of Japan, Government shipments, including those by the United Nations Relief and Rehabilitation Administration, were the major part of all exports of dairy products through 1946. Government sponsored shipments were resumed in some volume in 1950 under the various foreign economic aid programs of the United States and except for 1952 have accounted for a considerable part of total exports in terms of milk equivalent.

From 1935, and previously, through 1939 imports in terms of whole milk exceeded exports. Imports decreased markedly in 1940 and it was not until 1950 that importations were close to the prewar level. In 1952 milk equivalent value of imports exceeded that of exports for the first year since 1939. However, dairy imports under import regulations during 1953 and 1954 have declined from the 1952 level.

Exports

The most important of the United States dairy products exports is the processed milk group. Exports of these products made up the bulk of the whole milk equivalent of exports, including Government program commodities, and constitute almost 75 percent of the dollar value of the listed exports. The export value of nonfat dry milk solids is just under 25 percent of the total value of dairy products, but only a small amount of these exports is commercial; most of the nonfat dry milk solids exports represent shipments by the United Nations Childrens' Fund which purchased its supply from surplus Government stocks at a nominal sum.

Evaporated milk and, to only a slightly lesser extent, dry whole milk, unlike other dairy products of the United States, have been able to meet most price competition in the world markets; this accounts for the fact that the commodities have been able to maintain approximately the 1953 level of export. The reduced value of these exports was due to a general decline in dairy products prices with the lowering of support levels on April 1, 1954. The United States' share of the condensed milk market has all but disappeared. In 1953 exports of this commodity dropped from 30 million pounds to 20 million pounds; in 1954 just under 1.5 million pounds of condensed milk were exported. The loss is due primarily to the replacement in the Philippine Islands of the United States product by that of Dutch manufacture.

The increase in exports of butter was due almost entirely to the sale of the product in export markets at world prices from approximately 18 cents per pound under the domestic support level. Non-commercial sales of more than 11 million pounds of butter were sold in direct negotiations, primarily with other governments, during 1954, but the portion of these sales going into export channels does not appear in the export statistics of the commodity; before export the butter was to be processed into butter oil which is recorded in the catch-all category of dairy products, not elsewhere specified.

Cheese was also offered for export at reduced prices but export sales of only 300,000 pounds at reduced prices were made during 1954.

While Government shipments are ordinarily in export statistics, some do not so appear for 1954. The Foreign Operations Administration purchased dairy products from CCC stocks for shipments under a Christmas Package Program; the stocks were turned over to CARE and other agencies for packaging and appear, therefore, in export statistics only in "food for relief". There were 4.7 million pounds of butter, 3.5 million pounds of cheese, and 8.6 million pounds of nonfat dry milk solids sent abroad in these Christmas packages.

Imports

As was the case in 1953 more than 95 percent of the total value of dairy imports was in the form of cheese and casein. Controls on casein were lifted in December 1952, and casein imports were up almost 1/3 in the following year. However, in 1954 they were just slightly over the 1952 level. However, the value of the reduced casein receipts was greater in 1954, representing a 36 percent increase in value. Most varieties of cheese which were under import controls showed about a 10 percent decrease from 1953.

Most of the dairy items under import control showed imports of less than control allowances. Where imports, as shown in this report, exceed allowances under import authorizations it is due to the report data being prepared on a calendar year basis while the import controls are maintained on a fiscal year basis.

There is also a substantial out-movement of milk and dairy products from the continental United States to non-contiguous territories and possessions; the bulk of this trade is with Hawaii and Alaska. This movement is not, of course, considered as export trade and does not appear in the commercial export statistics. Since it may be of interest, these shipments are shown in the table on the following page which also contains the table on milk equivalent of dairy products trade with foreign nations.

Shipments of Dairy Products to Territories and Possessions 1940-54
(Quantity)

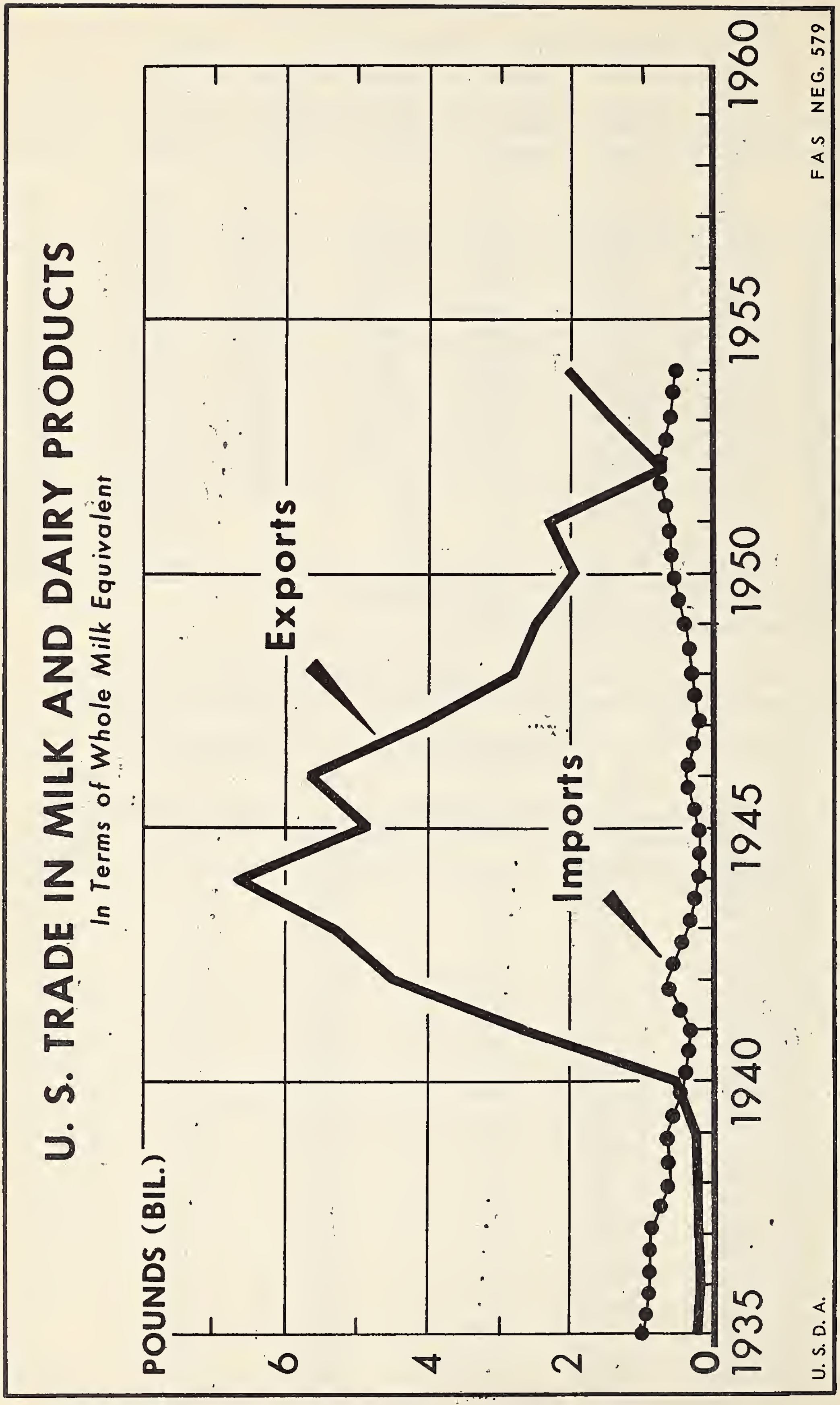
Year	Butter	Cheese	Evaporated Milk	Condensed Milk	Fresh Milk & Cream	Malted Milk	Dried Whole Milk	Whole Milk Equivalent
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	Million pounds
1940	7,740	4,252	29,082	526	534	920	800	270
1941	9,812	4,966	37,504	623	557	905	1,261	340
1942	5,204	4,363	17,745	1,108	388	864	1,410	202
1943	5,279	2,031	5,304	826	616	1,032	1,501	154
1944	5,207	2,653	4,761	633	842	1,850	2,621	168
1945	6,899	4,887	29,548	1,649	472	1,112	4,743	293
1946	5,005	5,108	63,870	4,306	658	785	9,424	372
1947	6,045	5,083	49,742	2,374	269	1,087	9,547	359
1948	2,236	4,468	27,952	758	153	420	11,786	242
1949	1,573	4,727	21,212	111	60	351	12,376	219
1950	1,702	3,791	19,297	110	50	322	13,530	217
1951	1,697	3,616	22,712	1/ 59	1/	1/ 105	11,612	207
1952	1,473	4,669	24,648	1/	1/	1/	13,873	234
1953	1,737	3,985	29,088	1/	1/	1/	14,706	247
2/ 1954	2,449	4,349	28,842	1/	1/	1/	14,946	266

1/ Discontinued after July 1951. 2/ Preliminary.
Source: Agricultural Marketing Service.

Whole Milk Equivalent of United States Trade in Milk Cream and Dairy Products in Relation to Production 1935-1954

Year	Total Milk production	Exports 1/	Percent of: U. S. production	Imports	Percent of: U. S. production	Export Balance
	Million pounds	Million pounds	Percent	Million pounds	Percent	Million pounds
1935	103,605	154	0.1	958	0.9	- 804
1936	104,710	115	0.1	829	0.8	- 714
1937	104,208	129	0.1	848	0.8	- 719
1938	108,107	156	0.1	572	0.5	- 416
1939	108,992	183	0.2	602	0.5	- 419
1940	111,512	472	0.4	344	0.3	+ 128
1941	117,088	2,652	2.3	276	0.2	+ 2,376
1942	120,433	4,476	3.7	635	0.5	+ 3,841
1943	118,517	5,233	4.4	303	0.3	+ 4,930
1944	118,123	6,645	5.6	127	0.1	+ 6,518
1945	120,628	4,876	4.0	169	0.1	+ 4,707
1946	118,697	5,691	4.8	344	0.3	+ 5,347
1947	118,114	4,050	3.4	167	0.1	+ 3,883
1948	113,671	2,750	2.4	235	0.2	+ 2,515
1949	117,003	2,458	2.1	315	0.3	+ 2,143
1950	117,302	1,988	1.7	548	0.5	+ 1,440
1951	115,341	2,265	2.0	579	0.5	+ 1,686
1952	115,597	676	0.6	787	0.7	- 111
1953	121,449	1,367	1.1	588	0.5	+ 779
1954 2/	123,702	2,034	1.6	502	0.4	+ 1,532

1/ From 1941 to 1954 includes export deliveries under government programs.
2/ Preliminary. Source: Agricultural Marketing Service.



U. S. TRADE IN MILK AND DAIRY PRODUCTS

In Terms of Whole Milk Equivalent

Exports and imports of principal dairy products, United States, 1920-1954

Year	Butter		Cheese		Condensed Milk		Evaporated Milk		Dried Whole Milk		Nonfat Dry Milk solids	
	Exports 1/	Imports 2/	Exports 1/	Imports 2/	Exports 1/	Imports 2/	Exports 1/	Imports 2/	Exports	Imports 3/	Exports	Imports 3/
	Mil.lbs.	Mil.lbs.	Mil.lbs.	Mil.lbs.	Mil.lbs.	Mil.lbs.	Mil.lbs.	Mil.lbs.	Mil.lbs.	Mil.lbs.	Mil.lbs	Mil.lbs.
1920	17.7	37.5	19.2	16.0	277.3		134.0					
1921	9.0	18.6	11.9	26.9	94.3		195.9					
1922	11.1	7.0	5.3	46.6	57.9		131.0					
1923	6.9	23.7	8.5	64.4	57.5		136.9					
1924	9.4	19.4	4.6	59.2	64.2	4.7	142.3	1.7				
1925	5.6	7.2	9.7	62.4	42.8	4.0	105.1	.6				
1926	6.1	8.0	4.1	78.4	38.7	.3	75.8	1.3				
1927	4.5	8.5	4.0	79.8	35.0	.5	68.2	2.1				
1928	4.4	4.7	2.8	81.4	38.9	1.1	76.9	1.5				
1929	3.9	2.8	3.0	76.4	41.3	.6	69.1	2.0				
1930	3.0	2.5	2.1	68.3	30.3	1.4	60.9	.2				
1931	2.0	1.9	1.9	62.0	19.8	.6	56.2	.6				
1932	1.6	1.0	1.5	55.6	11.9	.7	39.6	.5	1.9	.6	1.7	4/
1933	1.3	1.0	1.4	48.4	5.0	1.0	32.4	.1	1.6	.4	.9	.1
1934	1.2	1.3	1.4	47.5	8.2	.3	38.0	4/	1.7	4/	1.4	4/
1935	1.0	22.7	1.2	48.9	4.9	.6	32.2	4/	1.6	2.5	1.2	.3
1936	.8	9.9	1.1	59.8	2.4	2.2	23.6	4/	1.8	4.2	1.9	20.0
1937	.8	11.1	1.2	60.6	8.0	1.5	22.9	.1	2.1	1.5	2.1	1.4
1938	2.0	1.6	1.5	54.4	5.4	.7	23.7	4/	3.8	.1	6.4	4/
1939	2.3	1.1	1.5	59.1	2.3	.2	27.5	4/	6.3	4/	2.1	.9
1940	2.9	1.4	2.3	32.6	27.4	4/	118.7	4/	7.5	4/	8.7	4/
1941	3.3	3.7	95.0	20.0	82.0	4/	602.0	4/	15.0	4/	36.0	4/
1942	15.2	20.1	308.0	24.2	15.0	4/	381.0	4/	14.0	4/	134.0	4/
1943	85.6	3.3	165.0	25.2	44.0	4/	568.0	4/	39.0	4/	232.0	4/
1944	87.6	1.7	295.0	9.0	52.0	4/	540.3	.1	32.9	4/	206.5	4/
1945	17.9	3.7	194.3	8.3	113.2	4/	570.7	4.6	65.0	4/	180.2	.1
1946	.7	7.0	186.7	20.8	85.0	4/	926.3	.6	146.0	4/	167.9	4/
1947	11.0	3.8	177.4	8.7	108.2	4/	469.8	4/	91.5	4/	148.1	4/
1948	5.8	.2	95.6	23.6	111.4	4/	315.3	4/	100.5	4/	159.2	3.1
1949	4.2	.3	98.0	32.0	78.3	.1	249.5	4/	81.4	4/	213.7	5.3
1950	3.2	4/	47.5	56.2	27.9	4/	150.1	.4	62.6	4/	229.4	2.5
1951	7.1	.1	79.6	52.3	28.9	4/	203.4	4/	59.5	9.0	122.5	1.0
1952	.9	.5	3.8	49.2	29.6	4/	97.1	4/	42.5	37.0	58.7	.6
1953	.4	.1	5.9	56.2	20.0	4/	133.2	.5	46.1	5.9	98.1	.4
1954 5/	3.3	1.0	5.4	50.0	1.4	4/	131.4	.1	42.4	4/	156.8	.7

1/ Re-exports included, 1920-33. 2/ General Imports, 1920-33, beginning 1934, imports for consumption. 3/ Imports for consumption. 4/ Less than 50,000 pounds. 5/ Preliminary. - Source: Foreign Commerce & Navigation of United States

Total Imports of Milk, Cream and Dairy Products
Average 1935-39, annual 1950-54

Quantity

Item	Average 1935-39	1950	1951	1952	1953	1954 1/
	1,000 Pounds	1,000 Pounds	1,000 Pounds	1,000 Pounds	1,000 Pounds	1,000 Pounds
Cream	323	3	12	2	2	-
Whole Milk	26	68	23	2/	2	469
Skimmed Milk & Buttermilk	216	35	33	2	2/	-
Condensed, sweetened	398	2/	2/	2/	4	8
Evaporated	37	368	2	2	467	52
Condensed, n.e.s.	637	1	-	10	-	-
Whole Milk, dried	1,652	24	9,046	37,012	5,866	9
Cream, dried	-	2/	4	226	134	-
Skimmed Milk, dried	450	2,502	1,031	569	435	710
Buttermilk, dried	319	539	1,610	12,551	1,146	743
Malted Milk & Compounds, dried	14	34	408	5,209	7	3
Butter	9,278	10	59	458	126	962
Cheese - all	56,587	56,172	52,330	49,208	56,215	49,958
Swiss	8,668	6,079	7,135	7,322	8,656	8,422
Gruyere	2,311	2,317	2,331	3,056	3,215	3,085
Romano	)	5,369	2,342	1,401	2,226	1,542
Pecorino 3/	) 15,644	11,948	9,525	12,715	12,313	13,317
Reggiano	)	1,482	864	955	2,056	1,611
Parmesan	) 2,160	79	76	120	297	251
Provoloni	)	1,207	2,505	4,026	3,735	3,605
Provolette	) 5,094	53	61	73	46	31
Roquefort	2,383	1,641	1,688	1,815	1,806	1,879
Cheddar	4,748	13,293	12,072	6,525	7,810	2,814
Blue Mold	2,424	3,492	5,049	3,022	3,331	3,304
Edam & Gouda	3,326	3,755	4,333	3,585	4,560	4,732
Bryndza	-	2/	2	-	-	3
Sbrinz	-	1,518	769	385	273	82
All other cheese including processed not listed above	9,829	3,939	3,578	4,208	5,891	5,280
Casein, dried	8,180	54,552	43,386	56,838	74,246	59,833
Lactose, dried	-	804	1,592	2,968	2,274	2,484

1/ Preliminary. 2/ Under 500 pounds. 3/ Pecorino cheese, sheep's milk cheese, including small amounts not suitable for grating.

Prepared in Foreign Agricultural Service. Compiled from Foreign Commerce and Navigation of the United States and official records of the Bureau of the Census.

Total Imports of Milk, Cream and Dairy Products
Average 1935-39, Annual 1950-54
(Continued)

Value

Item	Average 1935-39	1950	1951	1952	1953	1954 1/
	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Cream	56	1	4	1	1	-
Whole milk	1	6	2	2/	2/	37
Skimmed milk & Buttermilk	5	2	3	2/	2/	-
Condensed (sweetened)	27	2/	2/	2/	1	1
Evaporated	3	38	1	2/	71	7
Condensed, n.e.s.	28	2/	-	1	-	-
Whole milk, dried	141	16	2,245	9,477	1,148	2
Cream, dried	-	2/	2	103	68	-
Skim milk, dried	175	202	78	77	39	64
Buttermilk, dried	23	47	147	1,476	137	66
Malted milk & Compounds, dried	5	8	171	2,250	3	3
Butter	1,759	6	34	271	60	447
Cheese - all	12,222	23,975	22,408	23,169	27,451	25,213
Swiss	2,656	4,198	4,162	4,143	5,145	4,962
Gruyere	n.a.	1,044	1,496	2,074	2,195	1,995
Romano	n.a.	2,015	788	544	737	515
Pecorino	n.a.	6,753	5,170	6,412	6,975	7,428
Reggiano	n.a.	585	363	443	824	672
Parmesan	n.a.	53	39	62	194	163
Provoloni	n.a.	551	1,183	1,919	2,004	1,881
Provolette	n.a.	24	29	34	24	16
Roquefort	n.a.	1,067	1,089	1,205	1,266	1,404
Cheddar	n.a.	3,256	3,266	2,107	2,365	755
Blue mold	n.a.	1,224	1,748	1,257	1,514	1,461
Edam & Gouda	n.a.	1,345	1,520	1,329	1,811	1,882
Bryndza	n.a.	--	2/	-	-	1
Sbrinz	n.a.	464	249	150	98	29
All other cheese, including processed not listed above	5,990	1,396	1,306	1,490	2,299	2,049
Casein, dried	623	10,055	13,604	8,535	9,286	10,146
Lactose, dried	2/	108	229	435	326	371
Total Value 3/	15,068	34,356	38,699	45,360	38,265	35,986

1/ Preliminary. 2/ Less than $500. 3/ Value of lactose not included in total value of dairy products.

Prepared in Foreign Agricultural Service. Compiled from Foreign Commerce and Navigation of the United States and official records of the Bureau of the Census.

Total Exports of Milk, Cream and Dairy Products
Average 1935-39, Annual 1950-54

Quantity

Item	Average 1935-39	1950	1951	1952	1953	1954 1/
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
Fresh milk and cream	550	7,637	4,395	4,814	3,790	1,920
Butter	1,370	3,215	7,127	914	362	3,343
All cheese	1,281	47,490	79,640	3,811	5,912	5,378
Cheddar, natural	n.a.	35,585	49,515	291	441	816
Other, natural	n.a.	826	1,171	983	812	1,214
Cheddar, processed	n.a.	8,214	26,740	1,363	3,707	2,239
Other, processed	n.a.	2,865	2,215	1,174	952	1,109
Processed milk						
Condensed, sweetened	4,586	27,896	28,870	29,553	19,978	1,412
Evaporated	25,971	150,148	203,352	97,095	133,245	131,418
Dried whole	3,116	62,550	59,496	42,537	46,064	42,421
Nonfat dry milk solids	2,735	229,450	122,543	58,728	98,097	156,813
Processed milk products						
Infants' and Dietetics' chiefly milk base	2/	8,958	11,103	9,261	11,382	10,269
Malted milk compounds and mixture	2/	5,190	7,310	5,022	3,332	3,322
Ice cream powder mixes	2/	1,489	1,354	1,435	1,106	1,044
Casein (inedible)	n.a.	91	211	167	206	140
Dairy products, N.E.S.	3,202	2,621	2,069	5,130	7,488	14,113

1/ Preliminary. 2/ Included with Dairy Products, not elsewhere specified.

Prepared in Foreign Agricultural Service. Compiled from Foreign Commerce and Navigation of the United States and official records of the Bureau of the Census.

Total Exports of milk, cream and dairy products
Average 1935-39, Annual 1950-54 (Continued)

Value

Product	Average 1935-39	1950	1951	1952	1953	1954 1/
	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Fresh Milk and Cream	49	908	640	808	785	537
Butter	407	2,036	2,245	750	287	1,797
All Cheese	285	7,368	25,333	1,962	2,639	2,261
Cheddar, natural	n.a.	5,138	14,264	135	196	284
Other, natural	n.a.	370	543	535	401	493
Cheddar, processed	n.a.	1,152	9,473	694	1,533	920
Other, processed	n.a.	708	1,053	598	509	564
Processed Milk						
Condensed, sweetened	549	6,278	6,506	6,827	4,512	363
Evaporated	1,800	19,104	29,016	15,851	20,351	19,431
Dried Whole	1,098	30,266	34,039	23,063	24,778	21,772
Nonfat dry milk solids	184	10,736	10,571	10,006	13,695	19,059
Processed Milk Products						
Infants' and Dietetics' chiefly milk base	2/	6,205	7,725	6,636	7,728	6,713
Malted milk, compounds and mixtures	2/	2,027	3,123	2,055	1,413	1,530
Ice cream powder mixes	2/	659	614	625	536	445
Casein (inedible)	n.a.	33	94	57	114	85
Dairy Products, N.E.S.	1,029	550	485	3,937	5,621	7,335
Total Value	5,401	86,170	120,391	72,577	82,459	81,328

1/ Preliminary. 2/ Included with Dairy Products, not elsewhere specified.

Prepared in Foreign Agricultural Service. Compiled from Foreign Commerce and Navigation of the United States and official records of the Bureau of the Census.

Import Controls

Import of butter and other dairy products have been subject to import licensing controls since early in World War II. In 1942, with ocean shipping facilities extremely limited in view of requirements, a series of executive orders were executed designed to limit imports to strategic materials including food. Concurrently with the imposition of these controls on public agencies, a general import order, M-63, was issued to control food imports for private accounts. While the order was issued by the War Production Board, the Food Distribution Administration of the Department of Agriculture acted as administrator. In late 1944, with the stockpile of critical war materials no longer a problem, the complete responsibility for food import controls was turned over to the War Food Administration of the Department of Agriculture; General Imports Order M-63 was replaced by War Food Order Number 63.

After the war, controls were gradually relaxed on all dairy products except butter. Authority for the continuation of import controls on butter was provided for under the first Defense Production Act (effective July 1, 1950). When the Defense Production Act of 1950 was extended in 1951, Section 104 was included providing that no dairy product should be imported which the Secretary of Agriculture determined would:

(a) impair or reduce domestic production;
(b) interfere with orderly domestic storing and marketing; or
(c) result in an unnecessary burden or expenditure under any Government price support program.

On August 9, 1951, the importation of butter was again embargoed; also embargoed was nonfat dry milk solids. All cheese imports were subject to quantitative quotas based on average annual imports during 1948-1950 and casein imports were given quantitative quotas based on imports during 1950-1951.

In 1952, the Defense Production Act was again extended. Section 104 was continued with two additional features; they were:

(a) the Secretary must now determine the necessity for controls for each type or variety of product;
(b) import quotas may be increased by 15 percent in the interest of international trade and relationships.

The principal effect of the change concerning determination of imports by types or varieties concerned cheese. On July 1952, import controls were terminated on Pecorino and Roquefort, variety cheeses made from sheep's milk, Swiss cheese, Gruyere process cheese, Bryndza, Goya and most miscellaneous varieties of this type, and Stilton, a blue-mold cheese. Import controls were also lifted on casein. On April 1, 1953, dried whole milk, dried cream and dried buttermilk were added to the list of embargoed items under Defense Food Order 3, the instrument controlling imports under the Defense Production Act authority.

The Defense Production Act expired on June 30, 1953. Previous to its expiration, the President, acting under authority granted under Section 22 of the Agricultural Adjustment Act, as amended, caused an investigation to be made by the Tariff Commission on the effects of unrestricted imports of dairy products on the Government's price support programs. On the basis of the Tariff Commission's report there was issued a Presidential Proclamation restricting imports of dairy products. Import regulation 1 was put into effect by the Department of Agriculture under authority of the Presidential Proclamation. The commodities and quotas established under Import Regulation 1 is shown in the following table along with the status of controls under Section 104.

STATUS OF IMPORTS OF DAIRY PRODUCTS UNDER SECTION 22

Commodity	Import status prior to July 1, 1953 under Section 104	Quota status under section 22	Import authorization July 1, 1954 through June 30, 1955
		Pounds	Pounds
Butter	Embargoed	707,000	707,000
Malted milk	High fat contents embargoed	6,000	6,000
Nonfat dry milk	Embargoed--Aug. 9, 1951	1,807,000	1,807,000
Italian cows milk cheese	Annual Quota 1/ 9,200,000 lbs.	9,200,100	9,200,000
Cheddar	Annual Quota 1/ 9,775,000 lbs.	2,780,100 2/	2,780,100
Edam and Gouda	Annual Quota 1/ 4,600,000 lbs.	4,600,200	4,600,200
Blue Mold	Annual Quota 1/ 3,450,000 lbs.	4,167,000 3/	4,167,000 3/
Dry Whole Milk	Embargoed April 1, 1953	7,000	7,000
Dry Buttermilk	Embargoed April 1, 1953	496,000	496,000
Casein	Controls terminated Dec. 30, 1952	Not Controlled	Not Controlled
Dried Cream	Embargoed April 1, 1953	500	500

1/ Including 15% allowance in interest of international trade.

2/ Including processed Cheddar; processed Cheddar treated separately under Section 104.

3/ Including processed blue-mold; processed blue-mold treated separately under Section 104.

Imports by Country of Origin
Average 1935-39, Annual 1950-54

Product and Country	Average 1935-39	1950	1951	1952	1953	1954 1/
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
BUTTER:						
Canada 2/	41	9	2	457	1	-
Cuba	290	3/	-	-	-	-
Denmark	476	1	56	-	-	299
Latvia	4/1,030	-	-	-	-	-
Lithuania	4/ 367	-	-	-	-	-
Netherlands	1,650	-	1	-	28	14
Norway	5/	-	3/	-	-	-
United Kingdom	892	-	-	-	-	-
Poland	6/ 142	-	-	-	-	-
U.S.S.R.(Europe & Asia)	6/ 536	-	-	-	-	-
Argentina	4/ 726	-	-	1	42	62
New Zealand	2,658	-	-	-	41	567
Australia	5/	-	-	-	-	7
Others	470	-	-	-	14	13
Total	9,278	10	59	458	126	962

1/ Preliminary. 2/ Includes Newfoundland and Labrador. 3/ Less than 500 pounds. 4/ Average 1935-38. 5/ If any under "Others". 6/ Average 1935-37.

Prepared in Foreign Agricultural Service. Compiled from Foreign Commerce and Navigation of the United States and official records of the Bureau of the Census.

Imports by Country of Origin
Average 1935-39, Annual 1950-54
(Continued)

Product and Country	Average 1935-39	1950	1951	1952	1953	1954 1/
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
CHEESE:						
All Cheese						
Canada 2/	5,050	2,981	2,783	1,539	1,068	489
Mexico	3/	10	8	5	2	6
Cuba	3/	9	4/	-	-	-
Dominican Republic	3/	6	1	-	4	-
Austria	3/	2	5	-	36	250
Belgium	3/	12	18	3	10	6
Denmark	3,764	3,783	5,752	4,155	4,641	4,516
Finland	1,333	309	84	561	500	791
France	2,980	1,725	1,875	1,877	1,877	1,933
Germany, Western	193	70	55	181	320	179
Greece	1,307	4/	14	10	83	82
Ireland	3/	4	41	-	1	2
Italy	25,993	16,951	14,994	20,203	20,039	20,516
Malta and Gozo	3/	11	32	30	17	20
Netherlands	3,946	3,491	3,869	3,384	4,200	4,326
Norway	780	519	556	631	769	709
Portugal	3/	11	26	26	33	30
Sweden	3/	188	114	93	81	106
Switzerland	7,946	7,796	8,813	8,939	10,775	10,260
Turkey	3/	19	18	19	7	7
United Kingdom	3/	35	29	36	23	23
Yugoslavia	3/	-	-	88	213	197
Bulgaria	3/	76	62	-	42	48
Czechoslavakia	3/	3	-	-	-	3
Rumania	3/	-	-	3	-	-
Argentina	1,516	7,576	3,666	2,359	4,635	3,062
Brazil	3/	40	-	-	-	51
Australia	3/	100	-	-	63	-
New Zealand	3	10,376	9,513	5,065	6,775	2,327
Others	1,776	70	7	-	1	19
Total	56,587	56,173	52,335	49,207	56,215	49,958

1/ Preliminary. 2/ Includes Newfoundland and Labrador. 3/ If any, under "Others". 4/ Less than 500 pounds.

Prepared in Foreign Agricultural Service. Compiled from Foreign Commerce and Navigation of the United States and official records of the Bureau of the Census.

Imports by Country of Origin
Annual 1950-54
(Continued)

Product and Country	1950	1951	1952	1953	1954 1/
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
CHEESE-continued					
Cheddar					
Canada 2/	2,771	2,538	1,452	955	482
Denmark	6	5	3	-	-
Ireland	-	14	-	-	-
Italy	4	4	-	-	-
Sweden	33	6	4	16	5
Australia	100	-	-	63	-
New Zealand	10,376	9,504	5,065	6,775	2,327
Others	3	1	1	1	-
Total	13,293	12,072	6,525	7,810	2,814
Swiss 3/					
Canada 2/	1	4	1	30	-
Austria	1	5	-	36	237
Denmark	338	379	723	500	290
Finland	297	84	530	445	761
France	18	62	4/	12	-
Germay, Western	13	34	143	208	37
Ireland	-	27	-	1	1
Italy	2	3	31	2	22
Netherlands	6	86	64	31	23
Norway	3	-	20	55	-
Sweden	6	1	1	5	-
Switzerland	7,711	8,763	8,861	10,543	10,123
Argentina	4/	7	3	-	-
Others	-	11	-	4	12
Total	8,396	9,466	10,377	11,872	11,506
Romano					
Italy	1,286	197	-	-	-
Switzerland	-	4/	-	-	-
Argentina	4,030	2,144	1,401	2,226	1,542
Brazil	40	-	-	-	-
Uruguay	13	-	-	-	-
Total	5,369	2,341	1,401	2,226	1,542

NOTES: At end of final sheet of cheese by type.

Imports by Country of Origin
Annual 1950-54
(Continued)

Product and Country	1950	1951	1952	1953	1954 1/
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
CHEESE-continued					
Percorino					
Canada 2/	36	4/	-	-	-
Denmark	-	2	-	29	-
Italy	11,509	9,452	12,630	12,125	13,180
Argentina	396	70	82	144	78
Others	7	1	3	15	59
Total	11,948	9,525	12,715	12,313	13,317
Reggiano					
Italy	278	352	588	357	322
Argentina	1,201	512	367	1,699	1,256
Others	3	-	-	-	33
Total	1,482	864	955	2,056	1,611
Parmesan					
Italy	80	75	120	297	251
Other	-	1	-	-	-
Total	80	76	120	297	251
Provolone					
Italy	1,255	2,556	4,098	3,775	3,634
Argentina	-	10	1	6	2
Others	4	-	-	-	-
Total	1,259	2,566	4,099	3,781	3,636
Roquefort					
France	1,641	1,688	1,815	1,806	1,875
Others	-	-	-	-	4
Total	1,641	1,688	1,815	1,806	1,879

NOTES: At end of final sheet of cheese by type.

Imports by Country of Origin
Annual 1950-54
(Continued)

Product and Country	1950	1951	1952	1953	1954 1/
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
CHEESE-continued					
Blue Mold					
Canada 2/	4/	4/	4/	-	-
Denmark	3,201	4,757	2,792	3,136	3,130
France	-	80	18	11	11
Italy	201	138	146	125	104
Norway	11	4/	-	-	-
Sweden	47	45	25	9	39
Switzerland	11	13	5	-	4
United Kingdom	17	13	17	11	16
Argentina	4/	-	-	-	-
Others	4	2	19	39	-
Total	3,492	5,048	3,022	3,331	3,304
Edam and Gouda					
Canada 2/	54	41	10	-	-
Cuba	8	-	-	-	-
Belgium	12	3	3	3	-
Denmark	83	207	92	157	251
Finland	12	-	-	8	11
Netherlands	3,423	3,752	3,206	4,035	4,161
Norway	6	172	214	221	196
Portugal	4/	10	12	4	3
Sweden	26	1	1	1	4
Switzerland	3	-	6	5	5
United Kingdom	9	2	-	-	-
Argentina	119	145	41	126	101
Total	3,755	4,333	3,585	4,560	4,732
Sbeinz					
Italy	5	8	2	-	-
Switzerland	1	4/	-	-	-
Argentina	1,467	755	383	273	82
Uruguay	45	6	-	-	-
Total	1,518	769	385	273	82

NOTES: At end of final sheet of cheese by type.

Imports by Country of Origin
Annual 1950-54
(Continued)

Product and Country	1950	1951	1952	1953	1954 1/
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
CHEESE-continued					
Other					
Canada 2/	118	200	75	84	7
Mexico	10	8	4	2	6
Dominican Republic	6	-	-	4	-
Belgium and Luxembourg	-	1	1	5	6
Bulgaria	72	62	-	42	45
Denmark	155	401	545	819	845
Finland	-	-	31	46	19
France	66	45	45	48	47
Germany, Western	57	21	19	74	147
Greece	4/	14	10	69	64
Hungary	-	2	-	-	-
Italy	2,331	2,209	2,588	3,357	3,002
Malta, Gozo, and Cyprus	11	32	27	15	18
Netherlands	62	31	114	133	141
Norway	499	384	397	493	513
Portugal	8	16	14	29	22
Sweden	76	61	61	50	59
Switzerland	68	30	66	228	128
Turkey	19	17	19	7	7
United Kingdom	7	14	19	11	7
Yugoslavia	-	-	88	213	180
Argentina	363	23	82	161	-
New Zealand	4/	9	-	-	-
Others	11	-	3	1	20
Total	3,939	3,580	4,208	5,891	5,278

1/ Preliminary. 2/ Includes Newfoundland and Labrador. 3/ Includes Ementhaler with eye-formation and Gruyere process cheese. 4/ Less than 500 pounds.

Prepared in Foreign Agricultural Service. Compiled from Foreign Commerce and Navigation of the United States and official records of the Bureau of the Census.

Imports by Country of Origin
Average 1935-39, Annual 1950-54
(Continued)

Product and Country	Average 1935-39	1950	1951	1952	1953	1954 1/
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
PROCESSED MILK						
Dried Whole						
Canada 2/	3/ 1	23	229	1,482	107	-
Denmark	-	4/	774	2,358	221	-
Netherlands	3/ 22	1	5,075	10,692	156	4
Sweden	-	-	-	9,358	545	-
Australia	-	-	2,067	38	-	-
New Zealand	3/ 4/	-	901	12,816	4,837	5
Others	5	-	-	267	-	-
Total	3/ 28	24	9,046	37,011	5,866	9
Dried Skimmed						
Canada 2/	3/ 22	2,153	50	569	435	484
Netherlands	3/ 412	-	67	-	-	-
Australia	-	349	711	-	-	226
New Zealand	4/	-	203	-	-	-
Total	434	2,502	1,031	569	435	710
Dried Buttermilk						
Canada 2/	5/1,547	539	273	11,387	1,142	318
Netherlands	5/ 40	-	-	253	4	-
New Zealand	-	-	1,337	911	-	425
Total	1,587	539	1,610	12,551	1,146	743
Dried Cream						
Canada 2/	-	4/	2	-	-	-
Denmark	-	-	-	147	134	-
Germany, Western	-	-	-	9	-	-
Netherlands	-	-	2	1	-	-
Sweden	-	-	-	11	-	-
Australia	-	-	-	24	-	-
New Zealand	-	-	-	34	-	-
Total	-	-	4	226	134	-

1/ Preliminary. 2/ Includes Newfoundland and Labrador. 3/ Average for 1938 and 1939. 4/ Less than 500 pounds. 5/ For 1939.

Prepared in Foreign Agricultural Service. Compiled from Foreign Commerce and Navigation of the United States and official records of the Bureau of the Census.

Imports by Country of Origin
Average 1935-39, Annual 1950-54
(Continued)

Product and Country	Average 1935-39	1950	1951	1952	1953	1954 1/
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
CASEIN						
Canada 2/	21	1,170	1,393	829	2,780	3,901
Azores	3/	68	251	342	198	120
Belgium	3/	-	2	103	-	-
Denmark	3/	1,740	3,136	3,633	708	114
France	2,380	1,623	6,281	3,183	960	3,564
Germany, Western	4/	990	742	640	-	22
Italy	3/	22	-	-	-	-
Netherlands	142	1,459	2,323	1,592	1,257	606
Norway	3/	-	22	899	983	460
Portugal	-	366	240	-	84	96
Sweden	3/	-	99	781	-	-
Switzerland	-	55	109	234	33	-
United Kingdom	43	-	-	-	21	-
Argentina	5,076	41,901	24,427	34,129	54,683	41,249
Brazil	3/	625	20	-	383	925
Uruguay	-	1,582	1,229	1,617	1,662	1,695
Union of So. Africa	-	63	1	-	-	-
Australia	5/ 336	1,023	2,128	-	1,050	1,460
New Zealand	97	1,760	983	8,077	9,444	5,591
Others	85	105	-	-	-	-
Total	8,180	54,552	43,386	56,838	74,246	59,803

1/ Preliminary. 2/ Includes Newfoundland and Labrador. 3/ If any, under "Others". 4/ Not available. 5/ For 1937.

Prepared in Foreign Agricultural Service. Compiled from Foreign Commerce and Navigation of the United States and official records of the Bureau of the Census.

CANNED MILK: United States Exports by Country of Destination, Average 1935-39, 1950-54

Country	Evaporated Milk						Condensed Milk					
	Average 1935-39	1950	1951	1952	1953	1954 1/	Average 1935-39	1950	1951	1952	1953	1954 1/
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
British Honduras	6	39	46	4	4	-	9	-	1	-	12	-
Canada 2/	749	-	6	969	5	20	31	9	5	15	-	3
Costa Rica	169	912	742	610	442	298	161	236	9	-	-	-
El Salvador	8	21	35	24	2	11	1	142	1	-	-	-
Guatemala	37	160	105	25	2	-	52	84	6	1	-	-
Honduras	116	116	149	138	111	154	197	100	27	3	1	-
Mexico	1,152	5,302	6,343	7,506	9,383	10,513	16	9	31	388	16	-
Nicaragua	88	342	363	327	389	364	25	11	13	2	1	-
Panama, Republic	3,824	2.316	438	362	56	40	174	9	683	7	4	-
Panama Canal Zone	3/	4,005	3,699	3,196	4,265	4,467	3/	103	431	44	71	52
Bahamas	4/	25	80	8	20	87	4/	-	-	-	22	-
Bermuda	153	116	20	10	4	13	3	5/	2	-	-	-
Cuba	533	18,510	23,184	13,678	13,275	15,926	486	1,618	7,372	11,372	55	91
Curacao NWI	777	998	178	56	51	67	42	15	12	-	-	-
Dominican Republic	6	126	24	4	4	-	14	713	100	2	25	-
Haiti	92	842	444	89	202	62	55	132	33	-	5/	-
Jamaica	39	15	25	27	88	11	194	1	-	2	-	-
Trinidad and Tobago	7	-	4	7	5	-	5/	-	-	-	-	-
Belgium	5/	2,193	-	1	-	-	-	-	-	75	86	113
France	16	8	9	13	16	9	11	-	-	1	-	-
Germany, Western	6/	318	-	-	10,012	122	6/	-	-	-	-	-
Greece	7	35,178	30,146	13	6,823	-	51	-	2	-	-	-
Ireland	7/ 9	6	-	4	-	-	-	-	-	-	-	-
Italy	6	224	1	1	3,491	-	3	-	-	-	-	-
Spain	-	-	-	-	914	-	-	-	-	-	-	-
Trieste	-	4	-	-	720	-	-	-	-	-	-	-
United Kingdom	496	-	38,977	-	-	1	5/	-	-	-	-	-
Arabian States	4/	163	334	87	74	52	4/	6	28	2	7	1
Bahrein	4/	1	-	-	5	-	4/	-	-	-	-	-
Israel	58	63	71	48	18	-	5/	3	15	1	5	-
Lebanon	-	59	7	5	72	-	-	-	3	-	-	-
Afghanistan	-	12	32	-	63	5	-	-	-	-	-	-
British Malaya	212	1	72	2	-	-	37	-	12,692	8	-	-
China	403	-	-	-	-	-	86	-	-	-	-	-
Hong Kong	488	114	140	5	13	-	62	567	-	-	-	-
India	120	-	2	1	5	-	-	-	8	45	-	2
Indonesia	935	28	5	-	-	-	4/	1,062	2,100	-	-	-
Japan	75	1,428	788	348	206	162	1	41	25	79	5	-
Korea	-	16	-	-	-	-	-	-	-	-	-	-
Pakistan	-	14	26	-	15	-	-	-	-	-	-	-
Philippine Republic	12,585	68,315	92,571	65,661	78,285	94,496	1,496	21,291	3,558	16,272	17,043	122
Taiwan (Formosa)	-	4	1,751	-	29	1,233	-	-	-	-	-	786
Thailand	1,076	65	149	-	-	-	5/	-	-	-	-	-
Argentina	2	-	-	-	-	9	-	-	-	-	-	-
Bolivia	152	410	749	738	414	11	39	41	65	507	34	-
Brazil	10	51	13	1	-	23	31	7	8	5/	-	-
Chile	4	62	361	174	-	72	3	-	941	227	-	-
Colombia	193	154	297	78	86	156	61	4	13	2	14	-
Ecuador	23	223	95	231	224	9	3	53	11	-	-	-
Peru	719	5,863	222	1,875	2,855	2,066	12	29	122	11	12	-
Surinam	6	10	2	6	-	-	4/	-	-	4/	-	-
Uruguay	7	20	18	5	3	9	4/	-	- 4	-	-	-
Venezuela	276	846	446	586	475	514	221	905	499	406	554	236
Angola	-	-	-	-	-	-	-	121	2	-	-	-
Belgian Congo	5/	181	37	56	5	-	5/	524	34	-	-	-
Egypt	2	2	2	-	-	-	-	-	1	-	-	-
French Equatorial Africa and Cameroun	4/	6	12	22	17	21	4/	-	-	-	-	-
French West Africa and Togo	4/	3	-	-	-	-	4/	-	-	-	-	-
Liberia	4	191	94	18	-	43	5/	34	6	1	-	2
Union of South Africa	4	-	-	-	-	-	961	-	-	-	-	-
Australia	74	-	-	-	-	-	1	-	-	-	-	-
French Pacific Islands	4/	6	7	15	-	-	4/	-	1	63	-	-
U. S. Trust Territories	-	-	-	-	-	163	-	-	-	-	-	4
Others	253	61	31	61	97	209	47	26	6	17	12	-
Total	25,971	150,148	203,352	97,095	133,245	131,418	4,586	27,896	28,870	29,553	17,979	1,412

1/ Preliminary. 2/ Includes Newfoundland and Labrador. 3/ Includes Republic of Panama. 4/ If any, under "Others". 5/ Less than 500 pounds. 6/ Not available. 7/ For 1936.

Prepared in Foreign Agricultural Service. Compiled from Foreign Commerce and Navigation of the United States and official records of the Bureau of the Census.

DRIED MILK: United States Exports by Country of Destination, Average 1935-39, Annual 1950-1954

Country	Dried Whole Milk						Non-Fat Dry Milk Solids					
	Average 1935-39	1950	1951	1952	1953	1954 1/	Average 1935-39	1950	1951	1952	1953	1954 1/
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
British Honduras	1	6	43	2	62	-	2/	112	53	-	-	70
Canada 3/	12	4	5	14	161	126	344	254	713	263	91	3
Costa Rica	41	716	282	447	428	234	12	1,343	442	10	418	300
El Salvador	2	130	154	241	301	207	3	1,324	208	42	162	565
Guatemala	49	1,137	1,147	559	751	460	5	1,026	204	18	158	962
Honduras	62	242	271	297	324	364	2	434	395	196	266	734
Mexico	41	1,020	407	293	640	83	52	4,722	10,261	11,982	5,827	298
Nicaragua	18	90	90	53	56	73	2/	670	5	126	98	204
Panama Republic	226	1,411	872	795	682	936	104	214	524	421	342	408
Panama Canal Zone	116	578	701	582	699	682	25	172	191	134	186	126
Bahamas	-	11	10	15	17	10	-	1	7	18	38	54
Barbados	2/	-	26	-	-	1	4	-	-	-	-	-
Bermuda	1	1	2	3	-	3	2/	21	97	108	102	18
Cuba	26	56	45	34	16	20	120	1,965	2,900	1,962	399	38
Curacao NWI	73	780	445	278	401	231	12	41	70	122	135	73
Dominican Republic	10	272	224	218	230	157	2/	27	125	174	20	294
Haiti	8	65	80	73	64	40	2/	3	16	64	70	685
Jamaica	5	-	11	6	-	-	33	-	-	-	7	-
Leeward and Windward Islands	-	-	-	-	-	-	-	-	-	-	-	1,404
Trinidad and Tobago	2	5	78	-	-	9	1	-	-	-	-	893
Austria	-	1	-	-	-	-	-	3,274	104	29	-	-
Belgium	4	19	-	30	-	14	1	2	-	-	-	-
Denmark	-	2/	-	-	-	-	-	-	40	-	-	-
Finland	2/	44	-	-	-	-	-	-	-	-	-	-
France	2/	2/	1	-	-	2	13	-	-	-	-	-
Germany, Western	4/	1	-	1	-	-	4/	1,027	57	43	1,121	280
Greece	6	3	10	7	-	-	-	20,644	3,273	1,764	-	109
Italy	4	-	122	-	-	-	-	21,719	2,094	239	-	271
Netherlands	-	-	-	-	-	-	9	-	-	-	-	-
Portugal	11	-	-	5	-	-	-	-	-	-	-	-
Spain	5	4	-	-	-	-	11	-	-	-	-	-
Sweden	2/	-	-	2	-	-	2/	-	-	-	-	-
Switzerland	2/	40	-	-	-	-	-	-	-	-	-	-
Trieste	-	2/	-	-	-	-	-	7,566	2,433	-	-	-
United Kingdom	47	10	-	-	-	-	1,252	-	-	-	-	104
Yugoslavia	-	2	-	-	-	-	-	22,854	30,305	2,888	-	-
Bulgaria	-	-	-	-	-	-	-	4,784	-	-	-	-
Czechoslovakia	-	-	-	-	-	-	-	5,170	-	-	-	-
Poland	-	-	-	-	-	-	-	11,455	-	-	-	-
Arabian States	5/	80	61	77	-	34	-	-	1	4	42	39
Bahrein	-	5	5	6	-	7	-	-	-	-	-	-
Iran	2/	198	295	71	-	79	-	6	286	6	204	238
Iraq	5	18	39	45	61	85	2/	-	1	6	139	1,156
Israel	7	28	4	455	8	-	2	7,279	9,832	20,101	18,131	25,750
Lebanon	-	243	130	167	126	61	-	8,158	7,360	3,258	4,858	7,144
Syria	5	37	68	35	58	12	1	-	2	-	-	22
Afghanistan	-	4	30	2	-	-	-	65	-	-	-	225
British Malaya	73	26	81	2	-	57	1	498	101	-	-	109
Burma	2	40	1	-	-	-	-	817	429	-	-	995
Ceylon	2	-	2	-	-	-	2/	222	-	-	-	-
China	58	-	-	-	-	-	96	-	-	-	-	-
Hong Kong	19	301	221	111	203	37	64	144	1	63	139	427
India	8	101	28	15	22	33	12	7,187	3,565	1,043	6,050	10,788
Indochina	1	22	-	2/	-	2	-	-	-	-	-	516
Indonesia	24	191	116	53	53	65	2/	4,862	1,635	112	1,025	871
Japan	7	2,279	3,593	8	31	5	2	58,931	35,163	9,893	18,548	40,242
Korea	-	7	-	485	-	-	-	746	1,000	506	26,106	28,388
Pakistan	-	53	-	-	-	-	-	7,595	39	-	-	1,229
Philippine Republic	309	1,619	2,744	88	1,945	1,175	403	5,114	4,144	562	3,488	3,465
Taiwan (Formosa)	-	298	765	117	564	972	-	790	1,046	-	-	2
Thailand	20	61	98	48	63	58	2/	3,898	75	-	-	198
Nansei and Nanpo Islands	-	-	-	-	-	-	-	-	-	-	-	990
Argentina	13	7	-	-	-	-	72	-	-	-	-	-
Bolivia	24	906	994	1,037	24	1	1	7	7	-	150	370
Brazil	66	1,356	2,535	769	291	1	1	5,306	1,544	1,251	3,392	4,842
British Guinana	2/	-	37	-	-	3	-	-	-	-	-	525
Chile	5	38	145	125	15	66	-	-	-	150	563	10,196
Colombia	251	617	1,682	202	591	2,865	7	7	62	44	-	1,898
Ecuador	23	521	370	406	686	145	2/	2,500	831	115	292	286
Paraguay	2/	-	-	2	-	-	-	-	-	-	199	191
Peru	42	634	121	356	385	281	22	1,159	356	544	415	739
Surinam	2/	32	2/	2	-	3	-	-	-	-	-	575
Uruguay	17	4	12	3	25	11	-	-	-	-	100	-
Venezuela	1,198	43,337	38,424	32,631	35,147	31,540	35	606	492	464	254	181
Anglo-Egyptian Sudan	-	16	-	-	-	-	-	-	-	-	-	-
Angola	5/	594	301	71	-	27	5/	82	11	-	-	-
Belgian Congo	56	2,040	1,247	868	548	1,072	2	16	7	-	-	342
British East Africa	-	-	-	-	-	2	-	-	-	-	-	817
British West Africa	1	8	10	3	-	-	-	-	-	-	-	-
Egypt	4	12	2/	1	-	1	2/	2,609	-	-	997	2,429
Ethiopia	-	9	12	19	-	5	-	-	-	-	-	6
French Equatorial Africa and Cameroun	5/	21	27	8	-	6	5/	-	-	-	-	-
French Somaliland	-	5	2/	-	-	-	-	-	-	-	-	-
Gold Coast and Togoland	4	4	-	-	-	-	1	-	-	-	-	-
Liberia	5	64	29	61	77	37	2/	1	8	-	-	-
Mozambique	16	14	12	4	-	9	3	-	-	-	-	-
Nigeria and Cameroons	14	9	5	1	-	-	2/	-	-	-	-	-
Northern Rhodesia	-	-	160	-	-	-	-	-	-	-	-	20
Tangier	-	2	1	-	-	-	-	8	21	3	-	-
Union of South Africa	14	24	17	-	-	-	2	2/	-	2/	-	-
Australia	4	-	-	-	-	-	1	-	-	-	-	-
French Pacific Islands	1	1	7	4	-	2	2/	-	-	-	-	-
Others	48	16	41	6	315	10	4	13	7	-	3,476	1,182
Total	3,116	62,550	59,496	42,319	46,070	42,421	2,735	229,450	122,543	58,728	98,098	155,286

1/ Preliminary. 2/ Less than 500 pounds. 3/ Includes Newfoundland and Labrador. 4/ Not available. 5/ If any, under "Others".

Foreign Agricultural Service. Compiled from Foreign Commerce and Navigation of the United States, and official records of the Bureau of the Census.

BUTTER: United States Exports
By Country of Destination
Average 1935-39, Annual 1950-54

Country	Average 1935-39	1950	1951	1952	1953	1954 1/
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
Canada 2/	10	2	3/	3/	3/	4/
El Salvador	3/	-	18	3/	-	24
Guatemala	26	66	14	4	1	4/
Honduras	33	26	26	11	20	7
Mexico	145	41	47	38	51	54
Nicaragua	8	3/	1	1	-	3
Panama Republic	572	62	23	6	9	32
Panama Canal Zone	5/	23	1	1	1	257
Bahamas	-	2	37	13	18	25
Bermuda	11	1	-	-	-	-
Cuba	3	830	906	494	49	46
Curacao, NWI	119	77	28	2	8	7
Dominican Republic	1	7	6	3	-	-
Haiti	68	50	48	32	36	52
Jamaica	2	5	-	-	3/	14
Trinidad & Tobago	1	4	5	6	3	4/
Germany, East 6/	-	-	-	-	-	110
United Kingdom	42	3/	3/	-	-	2
Italy	-	296	5,198	-	-	-
Yugoslavia	-	-	-	-	-	1,463
Arabian States	4/	20	21	21	23	19
Israel	-	35	21	1	-	-
Lebanon	-	39	2	-	-	-
Hong Kong	-	-	-	-	-	29
Japan	3/	62	26	8	3	2
Philippine Republic	150	43	114	47	36	363
Bolivia	1	1	6	1	-	-
Brazil	3/	3	5	-	3	10
Colombia	46	45	20	13	13	2
Peru	12	63	3/	3/	2	638
Venezuela	55	1,386	533	192	60	168
Liberia	3/	10	9	13	18	3
Mozambique	3/	2	1	-	-	-
Others	65	14	11	7	8	123
Total	1,370	3,215	7,127	914	362	3,343

1/ Preliminary. 2/ Includes Newfoundland and Labrador. 3/ Less than 500 pounds. 4/ If any, under "Others". 5/ Included with Republic of Panama. 6/ Includes shipments under the Danube Flood Relief Program of 110,000 pounds.

Prepared in Foreign Agricultural Service. Compiled from Foreign Commerce and Navigation of the United States and official records of the Bureau of the Census.

ALL CHEESE: United States Exports
By Country of Destination
Average 1935-39, Annual 1950-54

Country	Average 1935-39	1950	1951	1952	1953	1954 1/
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
British Honduras	2	-	1	-	-	3
Canada 2/	64	448	784	437	331	514
Costa Rica	5	8	7	6	12	3/
El Salvador	5	16	28	37	28	79
Guatemala	38	95	35	30	36	15
Honduras	9	105	2	-	5	11
Mexico	125	325	390	430	548	730
Nicaragua	7	2	3/	-	3/	2
Panama	515	493	390	495	468	444
Panama Canal Zone	4/	260	322	296	344	326
Bahamas	-	31	52	36	56	50
Bermuda	20	32	4	-	43	31
Cuba	72	462	355	639	387	477
Curacao, NWI	35	105	90	80	65	55
Dominican Republic	7	16	14	12	11	12
Haiti	30	111	112	73	69	121
Jamaica	11	4	1	-	2	11
Austria	-	-	-	-	830	52
Belgium	1	423	114	-	88	283
France	3/	3	-	-	3/	48
Germany, Western	5/	-	-	-	1	120
Greece	1	5,634	5,846	-	-	240
Italy	3/	2,510	12	-	-	274
Netherlands	3/	-	2	-	-	-
Switzerland	3/	3/	4	-	-	-
United Kingdom	2	30,517	67,922	4	11	55
Yugoslavia	-	2,501	1,981	-	-	-
Bolivia	1	8	5	17	1	-
Brazil	3/	-	1	-	8	-
Chile	3/	-	2	11	-	-
Colombia	18	7	8	-	1	13
Peru	12	-	14	9	30	20

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ALL CHEESE: United States Exports
By Country of Destination
Average 1935-39, Annual 1950-54
(Continued)

Country	Average 1935-39	1950	1951	1952	1953	1954 1/
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
Venezuela	60	959	739	787	904	978
Arabian States	6/	101	100	95	138	70
British Malaya	6	-	5	-	-	3
Hong Kong	11	7	3	-	5	8
Indonesia	1	1	1	-	8	-
Israel	1	414	5	-	17	-
Japan	3	85	151	100	67	82
Lebanon	6/	1,332	2	-	7	5
Philippine Republic	139	24	69	124	58	84
Belgian Congo	3/	36	30	10	8	23
Egypt	3/	375	-	-	-	-
Liberia	3/	4	9	19	12	3
Mozambique	-	1	-	-	-	-
Others	80	35	28	64	7/1,313	136
Total	1,281	47,490	79,640	3,811	5,912	5,378

1/ Preliminary. 2/ Includes Newfoundland and Labrador. 3/ Less than 500 pounds. 4/ Included with Republic of Panama. 5/ Not available. 6/ If any, under "Others". 7/ Of which 990,000 pounds exported to Spain.

Prepared in Foreign Agricultural Service. Compiled from Foreign Commerce and Navigation of the United States and official records of the Bureau of the Census.

CHEDDAR CHEESE (NATURAL):
United States Exports by Country of Destination
Annual 1950-54

Couhtry	1950	1951	1952	1953	1954 1/
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
Canada 2/	2	19	14	27	8
Guatemala	1	5	5	6	5
Mexico	2	39	19	23	19
Panama Republic	42	29	23	25	33
Panama Canal Zone	17	52	81	76	96
Bahamas	1	5	1	1	-
Cuba	3	13	4	29	12
Netherland Antilles	1	-	3	8	-
Haiti	4	2	2	3/	-
Belgium	50	102	-	88	264
France	2	-	-	-	48
Greece	5,288	2,853	-	-	24
Italy	-	9	-	-	9
United Kingdom	28,651	46,271	1	5	46
Yugoslavia	1,252	7	-	-	-
Chile	-	-	11	-	-
Venezuela	94	88	106	126	142
Israel	155	-	-	3/	-
Hong Kong	-	-	-	1	6
Japan	3	13	2	3/	3
Philippine Republic	1	-	3	7	8
Arabian States	5	-	6	4	-
French Morocco	-	-	-	-	50
Tunisia	-	-	-	-	20
Liberia	3/	-	3	3	-
Others	11	8	7	12	23
Total	35,585	49,515	291	441	816

1/ Preliminary. 2/: Includes Newfoundland and Labrador.
3/ Less than 500 pounds.

Prepared in Foreign Agricultural Service. Compiled from Foreign Commerce and Navigation of the United States and official records of the Bureau of the Census.

PROCESSED CHEDDAR CHEESE
United States Exports by Country of Destination
Annual 1950-54

Country	1950	1951	1952	1953	1954 1/
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
Canada	6	93	39	35	7
Costa Rica	6	6	5	11	-
El Salvador	15	25	27	16	54
Guatemala	22	23	19	18	7
Honduras	104	-	-	3/	-
Mexico	267	190	238	304	313
Nicaragua	2	-	-	-	2
Panama	268	160	250	329	255
Panama Canal Zone	119	177	143	164	96
Bahamas	7	17	15	23	19
Cuba	82	62	106	76	233
Curacao NWI	48	27	28	31	24
Dominican Republic	3/	-	-	6	6
Haiti	79	80	50	49	98
Austria	-	-	-	830	-
Belgium	137	11	-	-	-
Germany, Western	-	-	-	1	120
Greece	345	2,993	-	-	216
Italy	2,464	-	-	-	255
United Kingdom	1,867	20,520	3	-	-
Yugoslavia	-	1,974	-	-	-
Brazil	-	-	-	7	-
Bolivia	8	3	13	1	-
Peru	-	9	-	14	15
Venezuela	405	293	307	346	333
Spain	-	-	-	990	-
Japan	18	20	13	53	59
Philippine Republic	7	17	44	23	52
Lebanon	1,328	1	-	3	-
Palestine/Israel	203	4	-	17	-
Saudi Arabia	13	11	30	14	6
Belgian Congo	6	4	-	3	-
Egypt	375	-	-	-	-
Liberia	2	7	9	9	1
Others	13	13	24	334	68
Total	8,214	26,740	1,363	3,707	2,239

1/ Preliminary. 2/ Includes Newfoundland and Labrador. 3/ Less than 500 pounds.

Prepared in Foreign Agricultural Service. Compiled from Foreign Commerce and Navigation of the United States and official records of the Census.

MALTED MILK COMPOUNDS AND MIXES
United States Exports by Country of Destination
Annual 1950-54

Country	1950	1951	1952	1953	1954 1/
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
British Honduras	2	2/	5	3	-
Canada 3/	96	7	21	19	30
Costa Rica	50	23	52	67	45
El Salvador	28	32	50	50	28
Guatemala	76	62	72	70	56
Honduras	55	39	48	57	65
Mexico	25	42	44	50	21
Nicaragua	23	26	21	35	18
Panama	61	68	57	74	53
Panama Canal Zone	54	52	49	64	46
Bahamas	1	2/	-	-	-
Barbados	1	2/	4	1	4
Bermuda	5	2/	-	18	5
Cuba	217	186	202	235	260
Curacao N I	256	240	169	210	121
Dominican Republic	40	60	94	76	83
Haiti	17	33	45	36	42
Jamaica	-	4	-	19	6
Belgium	4/	2/	-	18	31
Portugal	12	2/	-	-	1
Arabian States	3	25	25	4/	6
Iran	75	104	7	17	12
British Malaya	1	664	490	-	-
Ceylon	2,344	3,039	2,056	926	1,186
Hong Kong	8	8	46	4	7
India	-	768	73	-	-
Indonesia	13	25	4	-	-
Japan	118	12	-	12	-
Pakistan	116	7	-	-	-
Philippine Republic	588	707	750	1,116	1,039
Thailand	-	2/	-	8	-
Bolovia	11	16	31	-	18
Brazil	-	28	-	-	-

-Continued-

MALTED MILK COMPOUNDS AND MIXES
United States Exports by Country of Destination
Annual 1950-54
(Continued)

Country	1950	1951	1952	1953	1954 1/
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
British Guiana	4	4	4	4	5
Colombia	7	38	8	11	15
Ecuador	15	18	27	25	15
Paraguay	-	2	-	-	-
Peru	12	45	6	12	6
Uruguay	78	47	-	7	10
Venezuela	704	813	490	12	40
Belgian Congo	3	4	8	1	-
Gold Coast	-	2/	-	-	-
Liberia	2	4	8	1	3
Mozambique	54	27	24	24	19
Union of So. Africa	-	2/	4	-	-
Others	15	31	29	49	26
Total	5,190	7,310	5,023	3,332	3,322

1/ Preliminary. 2/ If any, under "Others". 3/ Includes Newfoundland and Labrador. 4/ Less than 500 pounds.

Prepared in Foreign Agricultural Service. Compiled from Foreign Commerce and Navigation of the United States and official records of the Bureau of the Census.

ICE CREAM POWDER MIX
United States Exports by Country of Destination
Annual 1950-54

Country	1950	1951	1952	1953	1954 1/
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
Canada 2/	26	38	68	30	20
Costa Rica	10	3	7	8	18
El Salvador	16	17	16	7	23
Guatemala	94	62	43	56	45
Honduras	14	20	35	3	18
Mexico	12	31	102	56	23
Nicaragua	6	3	8	3	12
Panama	21	34	25	68	48
Panama Canal Zone	2	18	-	-	1
Bahamas	8	7	35	49	84
Bermuda	60	16	20	14	-
Cuba	8	23	127	41	31
Curacao NWI	245	142	203	126	104
Dominican Republic	27	23	3	3/	-
Haiti	19	10	10	13	39
Belgium	188	200	-	-	-
Germany, Western	41	-	-	-	-
Turkey	-	-	-	-	24
Arabian States	106	206	269	329	289
Lebanon	7	-	3	2	18
Hong Kong	52	29	16	13	19
Indonesia	1	3	9	10	6
Japan	168	94	107	106	19
Philippine Republic	40	84	35	29	19
Thailand	18	40	44	77	75
Bolivia	-	4	3	1	-
Brazil	-	6	-	-	-
Chile	2	-	6	-	6
Colombia	22	17	15	1	22
Ecuador	4	4	-	-	4
Peru	-	-	5	2	3
Surinam	10	12	18	20	6
Venezuela	182	140	133	19	5
Belgian Congo	18	11	21	20	22
Liberia	29	20	21	40	10
Mozambique	6	7	7	2	-
Union of So. Africa	3/	-	2	15	-
Others	27	30	20	26	31
Total	1,489	1,354	1,436	1,186	1,044

1/ Preliminary. 2/ Includes Newfoundland and Labrador. 3/ Less than 500 pounds.

Prepared in Foreign Agricultural Service. Compiled from Foreign Commerce and Navigation of the United States and official records of the Bureau of the Census.

INFANT AND DIETETIC FOOD, MILK BASE;
United States Exports by Country of Destination
Average 1935-39, Annual 1950-54

Country	Average 1935-39	1950	1951	1952	1953	1954 2/
	1,000 pounds 1/	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
British Honduras	45	3/	2	2	-	-
Canada 4/	243	13	24	170	166	196
Costa Rica	27	123	140	177	174	189
El Salvador	9	98	142	199	192	239
Guatemala	18	136	243	240	259	253
Honduras	28	43	80	89	89	125
Mexico	76	915	1,278	698	1,310	700
Nicaragua	5	47	33	41	35	102
Panama	119	132	136	143	138	154
Panama Canal Zone	5/	77	108	237	27	18
Bahamas	6/	-	-	5	4	17
Bermuda	30	-	6	2	9	7
Cuba	191	654	585	463	380	435
Curacao NWI	62	83	89	110	103	109
Dominican Republic	23	77	91	102	95	111
Haiti	10	27	53	54	59	65
Jamaica	61	-	-	3/	-	-
Trinidad & Tobago	39	9	-	-	-	-
Belgium	3/	90	22	70	97	92
France	6	-	-	3	2	4
Germany, Western	7/	-	3/	3/	1	2
Greece	1	49	11	2	4	5
Italy	3/	2	2	25	-	10
Portugal	4	3/	-	3	7	-
Sweden	60	-	-	-	-	-
Turkey	2	7	15	10	18	4
United Kingdom	158	-	2	3/	-	9
Arabian States	6/	2	4	5	6	5
Iran	3/	52	100	20	28	38
Iraq	1	37	44	89	96	157
Israel	14	43	36	66	15	22
Lebanon	6/	9	-	4	19	15
Syria	1	2	2	3	17	6

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INFANT AND DIETETIC FOOD, MILK BASE:
United States Exports by Country of Destination
Average 1935-39, Annual 1950-54
(Continued)

Country	Average 1935-39	1950	1951	1952	1953	1954 2/
	1,000 pounds 1/	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
British Malaya	14	2	-	-	-	-
Ceylon	25	8	7	108	14	10
Hong Kong	21	149	38	82	130	41
India	28	260	155	97	9	21
Indochina	6/	3	-	-	-	2
Indonesia	7	38	46	-	850	27
Japan	77	57	14	3/	-	2
Korea	-	-	-	-	-	2
Pakistan	-	28	2	1	4	8
Philippine Republic	223	1,081	1,408	416	1,487	735
Taiwan	-	-	-	-	-	439
Thailand	14	104	175	193	399	338
Argentina	132	10	176	4	80	360
Bolivia	4	52	86	84	47	77
Brazil	7	644	1,466	722	196	343
British Guiana	15	-	-	-	-	-
Chile	4	4	4	42	1	1
Colombia	170	672	757	545	552	794
Ecuador	5	106	99	129	237	145
Paraguay	3/	3/	2	-	2	-
Peru	97	260	301	325	317	190
Surinam	3/	5	1	2	7	2
Uruguay	13	143	108	168	146	143
Venezuela	921	2,428	2,826	3,088	3,094	3,144
Angola	6/	15	3	1	1	9
Belgian Congo	1	43	4	9	6	-
Egypt	3	35	7	19	66	89
French Morocco	3/	-	-	-	3/	-
Liberia	1	5	4	6	3/	5
Mozambique	11	7	6	6	3	3/
Union of So. Africa	63	60	142	164	307	227
Others	65	12	18	17	78	26
Total	3,202	8,958	11,103	9,261	11,382	10,269

1/ Includes Malted Milk, etc. 2/ Preliminary. 3/ Less than 500 pounds. 4/ Includes Newfoundland and Labrador. 5/ Included with Republic of Panama. 6/ If any, under "Others". 7/ Not available.

Prepared in Foreign Agricultural Service. Compiled from Foreign Commerce and Navigation of the United States and official records of the Bureau of the Census.

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FOREIGN AGRICULTURE CIRCULAR

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREIGN AGRICULTURAL SERVICE
WASHINGTON, D.C.

FD 5-55 February 18, 1955

DATE PRODUCTION AND TRADE IN IRAQ AND IRAN, 1954 CROP

The production of dates in Iraq, the major date producing and exporting country, is estimated at 385,800 short tons, which is the same as last year. It is estimated that 33,000 tons were damaged by the November rains, and are unfit for food uses. Regional production for export is estimated to be 110,000 tons in the Basra area, and 132,000 tons in the central Euphrates area.

The Iranian date crop is 12 percent larger than the 1953 crop. The flood waters from the Tigris and Euphrates valleys flooded practically all of the date orchards in the Kforranshahr area, where about one-fourth of the Iranian date orchards are located. Date production in this area is especially good, and the quality is excellent.

DATES: Production in Iraq and Iran, 1950-54

Year	Iraq	Iran
	Short tons	Short tons
1950...	440,900	152,100
1951...	385,800	136,900
1952...	116,100	153,200
1953...	385,800	137,800
1954...	1/ 385,800	154,300

1/ Includes 33,000 tons damaged by November rains, and unfit for food.

Domestic consumption of dates in Iraq is estimated to be about 110,000 short tons, leaving 243,000 tons available for export. Up to January 1, 1955, 148,000 tons had been committed for export, leaving 95,000 tons from the 1954 crop, and 9,000 tons of the 1953 Basra date crop uncommitted. Date association officials consider this a normal carry-over.

The demand for Iranian dates has been good this season. Exports for the first 3 months of the season (August 23 to November 21, 1954, inclusive) amounted to 23,691 tons, compared with 21,033 tons for the entire 1953-54 season.

Packaged Iranian dates to the United States, while relatively small in volume, have shown a substantial increase in each of the past 3 seasons.

Prices paid for Basra dates for the United States market are 2-1/2 cents a pound for Hallawi and Khadrawi, and 2 cents a pound for Sayir dates.

DATES: Baghdad monthly wholesale prices
of Zahdi dates of Central Iraq, tax included

Month	Loose in bulk	Baskets	Gunny sacks
	(Prices in dollars per short ton)		
January..	21.59	24.13	26.67
February.	21.59	22.86	25.40
March.....	21.59	24.13	26.67
April.....	25.40	27.94	30.48
May.......		22.86	26.67
June......	-	20.32	21.59
July......	-	17.78	20.32
August....	-	15.24	17.78
September	20.32	10.16	12.70
October..	19.05	-	-
November.	13.97	15.24	19.05
December.	16.51	20.32	22.86

Source: Bulletin of the Baghdad Chamber of Commerce.

Exports of United States dates in the first 4 months of 1954 amounted to 1,335 tons, which is well above exports for the entire 1953 crop year. Canada and Cuba made the largest purchases.

DATES: Exports from the United States,
by country of destination,
season 1953-54 and Sept.-Dec. 1953 and 1954

Country of destination	1953-54	1953 Sept.-Dec.	1954 Sept.-Dec.
	- 1,000 pounds -		
Canada...........	427	423	507
Mexico...........	71	58	122
Cuba.............	250	237	302
Dominican Republic	19	19	32
Venezuela........	172	57	120
Panama...........	29	29	1/
Argentina........	1/	1/	129
Other............	163	34	123
Total..........	1,131	857	1,335

1/ If any, included in "other".
Compiled from official records of the Bureau of the Census.

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FOREIGN AGRICULTURE CIRCULAR

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREIGN AGRICULTURAL SERVICE
WASHINGTON, D. C.

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★ JUN 28 1955 ★
U. S. DEPARTMENT OF AGRICULTURE

FD 4-55 May 17, 1955

MILK PRODUCTION AND UTILIZATION IN PRINCIPAL PRODUCING COUNTRIES IN 1954

The postwar upward trend in milk production was continued during 1954 with cow's milk production in 19 primary milk producing countries of the world totaling more than 367 billion pounds, an increase of 2 percent over 1953.

Weather conditions were generally favorable throughout the year and the increase in milk production was fairly general; the only countries showing declines from 1953 were Argentina, Norway, Sweden, and New Zealand. The decline in New Zealand's production was largely due to bad weather. The lowered output in Sweden was attributed to the relatively low price of milk in relation to prices of meat. The decline in production in Norway was due to fewer cows being milked; Norway was one of only two countries showing declines in milk cow numbers from 1953, West Germany being the other country.

The largest absolute increase in milk production was registered in France where the 1954 milk production of almost 40.9 billion pounds represented an increase of 2.8 billion over 1953, a rise of 5.9 percent. The gain of over 2.2 billion pounds registered by the United States was the next highest absolute amount but represented an increase of only 1.9 percent over the previous year. Australia also showed a significant increase, milk production increasing almost 1 million pounds, more than 8 percent greater than 1953. The increase of more than 500 million pounds in Italy represented less than a 3 percent gain in milk production in that country.

The largest relative increase in production was made in Greece where the 171 million pounds of additional milk produced was a gain of more than 40 percent over 1953.

Increases in production per cow were registered by more than one-half the countries. Among the primary countries showing decreases was Canada. The drop in production per cow in Canada was very slight, as was also the case with Belgium. Denmark showed a decline in production per cow as did Greece, but in the case of Greece, the decline was attributed to the large increase in cows being milked.

A summary of this information appeared in the May 16, 1955 issue of Foreign Crops and Markets.

COWS' MILK: Production and utilization in specified countries, 1954 (preliminary) and 1953.

Country	Production			Utilization					
	Milk cows	Production per cow	Milk production	Fluid milk 1/	Butter	Cheese	Canned milk	Other uses 2/	Feed
	1,000 head	Pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
1954									
Canada	3/ 3,233	5,222	16,884	6,148	7,777	937	648	779	595
United States	22,406	5,512	123,702	57,200	32,902	13,450	6,230	10,565	3,355
Argentina	3,600	3,111	11,236	3,859	2,383	2,043	4/	4/ 1,816	1,135
Austria	1,164	4,641	5,401	2,568	1,715	344	4/	4/ 14	760
Belgium	990	8,136	8,054	1,888	4,992	155	41	2	976
Denmark	1,506	7,900	11,898	1,609	8,175	1,237	4/	4/ 337	540
Finland	1,158	5,609	6,495	2,789	3,078	441	-	-	187
France	9,182	4,450	40,860	8,581	17,070	6,583	4/	4/ 681	5/ 7,945
Germany, Western	5,777	6,446	37,597	12,725	17,372	2,101	811	465	4,123
Greece	286	2,053	587	349	75	39	-	-	124
Ireland	1,189	4,548	5,408	1,030	3,090	6/ 72	4/	4/ 443	773
Italy	3,870	4,786	18,523	5,425	2,905	6,152	23	68	3,950
Netherlands	1,548	8,576	12,967	3,048	4,312	3,439	1,029	401	738
Norway 7/	679	5,128	3,527	1,730	813	530	34	125	295
Sweden	1,542	6,248	9,634	3,573	4,576	889	13	110	473
Switzerland 7/	888	6,922	6,246	2,306	1,349	1,351	4/	4/ 204	1,036
United Kingdom	3,730	6,489	24,195	17,387	1,669	1,937	659	813	1,730
Australia	2,251	5,857	8/ 13,184	2,750	8,703	1,061	249	421	-
New Zealand 9/	1,999	5,502	10,998	977	7,458	2,077	4/	4/ 166	320
1953									
Canada	3/ 3,146	5,228	16,449	6,000	7,580	852	640	767	610
United States	22,234	5,449	121,449	56,100	32,260	13,347	6,213	10,195	3,334
Argentina	3,500	3,371	11,804	3,859	2,497	2,497	4/	4/ 1,816	1,135
Austria	1,162	4,599	5,344	2,632	1,611	331	4/	4/ 15	755
Belgium	962	8,146	7,836	1,812	4,915	162	37	2	908
Denmark	1,486	7,978	11,856	1,651	8,003	1,303	4/	4/ 359	540
Finland	1,156	5,435	6,283	2,745	2,921	430	-	-	187
France	8,972	4,301	38,590	8,331	15,504	6,129	4/	4/ 681	5/ 7,945
Germany, Western	5,863	6,316	36,905	12,904	16,843	2,127	743	461	3,827
Greece	183	2,273	416	271	43	20	-	-	82
Ireland	1,174	4,532	5,320	1,053	2,950	6/ 72	4/	4/ 501	744
Italy	3,695	4,872	18,001	5,334	2,679	6,038	23	68	3,859
Netherlands	1,504	8,554	12,837	2,992	4,392	3,349	970	406	728
Norway 7/	696	5,100	3,596	1,713	941	488	34	125	295
Sweden	1,539	6,389	9,833	3,559	4,841	893	11	110	419
Switzerland 7/	886	6,702	6,030	2,333	1,107	1,467	4/	4/ 153	970
United Kingdom	3,682	6,448	23,752	17,376	1,236	2,091	649	690	1,710
Australia	2,223	5,486	8/ 12,195	2,688	7,673	1,051	301	482	-
New Zealand 9/	1,962	5,984	11,740	971	8,057	2,147	4/	4/ 262	303

COWS' MILK: Production and utilization in specified countries, 1934-38

Country	Production: Milk cows	Production: Production per cow	Production: Milk production	Utilization: Fluid milk 1/	Utilization: Butter	Utilization: Cheese	Utilization: Canned milk	Utilization: Other uses 2/	Utilization: Feed
	1,000 head	Pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
Canada 10/	3/ 3,780	4,043	15,284	4,602	8,144	1,347	218	181	792
United States	23,933	4,291	104,930	42,520	44,363	6,503	4,607	4,198	2,739
Argentina 11/	2,930	2,331	6,826	3,632	1,998	969	4/	4/ 227	-
Austria 12/	1,210	4,630	5,602	3,068	1,212	661	-	-	661
Belgium	967	7,022	6,790	1,433	4,321	163	15	42	816
Denmark 9/ 13/	1,692	6,905	11,684	1,433	9,314	331	4/	4/ 55	551
Finland	1,309	4,268	5,587	2,556	2,735	205	-	-	91
France	8,400	3,929	33,000	7,654	12,378	5,278	4/	4/ 190	5/ 7,500
Germany, Western 9/ 14/	6,049	5,467	33,069	10,295	17,306	1,279	4/	4/ 331	3,858
Greece 13/	181	1,384	251	181	54	16	-	-	-
Italy	3,466	3,968	11/ 13,750	3,700	2,700	3,600	24	626	3,100
Netherlands	1,460	7,658	11,180	2,321	5,536	2,291	4/	4/ 520	512
Norway 9/ 13/	802	3,683	2,954	1,124	1,111	489	4/	4/ 53	177
Sweden 9/ 13/	1,947	5,258	10,238	3,283	5,170	782	4/	4/ 44	959
Switzerland 7/ 13/	902	6,297	6,041	2,125	1,497	1,303	4/	4/ 49	1,067
United Kingdom	3,300	5,583	18,424	11,100	2,800	1,008	647	686	2,183
Australia 9/	2,545	4,629	8/ 11,780	1,612	9,466	444	4/	4/ 258	-
New Zealand 9/	1,787	5,694	10,176	665	7,255	1,969	4/	4/ 127	160

1/ Includes milk used for cream. 2/ Includes milk used for ice cream, dried whole milk, minor products, waste and balance. 3/ Includes cows kept mainly for milk. 4/ Canned milk included with other uses. 5/ Includes both hand-fed milk and milk suckled by calves. 6/ Milk used for factory cheese production only. 7/ Production and utilization include goats' milk. 8/ Excludes milk fed to calves. 9/ Years ending June 30. 10/ Average 1935-39. 11/ For 1938. 12/ For 1934. 13/ Average 1933-37. 14/ Average 1935-38.

Foreign Agricultural Service. Prepared or estimated from official statistics, reports of Agricultural Attaches and other U.S. Representatives abroad and other information. May 16, 1955.

Of the more than 7 billion pound increase in milk production registered in 1954, most went to the manufacture of butter which took almost 4.4 billion pounds of the increase. Fluid milk utilization accounted for 23 percent of the increased output and milk going to fluid consumption totaled more than 135.9 billion pounds in the 19 countries during 1954. The increase in fluid use was contrary to last year's pattern when utilization as fluid milk remained relatively unchanged while total production increased 6 percent over 1952. In spite of the increase, the share of fluid utilization continued to decline taking only 37.0 percent of total production compared with 37.3 in 1953. The pro-rata share of butter use jumped from 35.0 to 35.5 percent.

The amount of milk going to the manufacture of cheese in 1954 remained about the same as the 1953 figure and its share dropped 0.2 percent to 12.2 percent of total production. The utilization for "other" uses, such as canned milk and dried milk production, increased about 1.6 percent over 1953 by taking 433 million pounds of the increased production. Milk fed to livestock increased 2.5 percent over 1953, with utilization in this category increasing 704 million pounds.

The increased utilization of milk for butter was fairly general with 14 of the 19 countries showing increased utilization. All of the countries showing declines in total milk production showed losses in utilization for butter. Four out of five of these countries showing decreased use for butter registered gains in the utilization of milk for fluid purposes; Argentina showed the same fluid use for 1954 as for previous years. Only the Netherlands, of the countries showing increases in total production, registered a decline in the use of milk for butter manufacture. The five countries, Australia, Denmark, Germany, Ireland, and Switzerland, which showed declines in the use of milk for fluid purposes all showed increases in total milk production. New Zealand, on the other hand, showed a decline in total production and utilization for processing purposes, but did register a small increase in fluid use.

The largest gain in fluid use was 1.1 billion pounds registered in the United States; this amounted to a 2 percent increase over 1953. Most of the other gains in fluid milk use were very small on an absolute basis, the increase of 250 million pounds in France, for example, representing a gain of about 3 percent. The increase in Greece, while small, represented a rise of almost 29 percent in the use of milk for fluid consumption; fluid consumption in Greece, however, remained low and the 349 million pounds consumed in this manner represented an annual consumption of only 42 pounds per person.

France registered the largest gain in milk going into butter manufacture. Utilization in this category increased almost 1.6 billion pounds, or more than 10 percent over 1952. Australia raised its utilization of milk for butter manufacture to 8.7 billion pounds, an increase of more than 1 billion over the previous year; this represented a 13.4 percent increase, but Australia's utilization for butter was still 8 percent under prewar.

Butter production utilized 32.9 billion pounds of milk in the United States during 1954, an increase of 642 million pounds, 2 percent over 1953; milk utilization for butter, however, was still less than 75 percent of prewar in the United States. While the increase of milk going to butter for Greece was 74 percent above 1952, the increase was relatively small on an absolute basis. The United Kingdom, however, which put 433 million more pounds into butter manufacture, increased utilization in this category by 35 percent; the United Kingdom's utilization, however, for this purpose remained less than 60 percent of that registered during the prewar period. Switzerland is also still utilizing less milk for butter than during the prewar period, even though the increase in utilization from 1953 to 1954 was almost 22 percent. The increases in butter utilization in Italy, Austria and Germany now put these countries' supplies for this purpose over the amounts so utilized in the 1934-38 period. The gain in France, however, was more than 1.5 billion pounds, a 10 percent increase over 1952, and put France's utilization for butter making purposes at almost 138 percent of the prewar level.

While utilization for butter in the reported countries was still about 7 percent under prewar utilization of milk, milk for cheese, on the other hand was 156 percent of the average utilization during the 1934-38 period. Milk for cheese manufacture increased in 15 countries over prewar while showing declines in only 3; comparable data for the periods do not exist for Ireland. The United States in 1954 consumed more than 200 percent of milk utilized during the prewar period, as was also the case in Argentina, Greece and Australia. Other countries showing significant gains in milk utilized for cheesemaking were the United Kingdom at 192 percent, Italy, 171 percent, and the Netherlands, 150 percent over prewar.

Of the countries reporting utilization for canned milk products, only Australia recorded a decrease in utilization for this purpose, 249 million pounds being used in 1954 as compared with 301 million pounds in 1953, a decrease of 20 percent. Italy's utilization of milk for canning during 1954 was slightly under that used in the 1934-38 period.

Total "other use", including milk for canning, took 7.4 percent of total production in 1954, the same proportion as in 1953; the pro rata share of total production in prewar was 4.2 percent. The total use in 1954 was 27.1 billion pounds, 1.6 percent more than in 1953. Six countries showed decreased utilization, 5 showed gains and 6 showed no change in utilization in this "other" category. Significant increases were registered by the United States which showed a gain of 370 million pounds, 3.6 percent more than the previous year, the United Kingdom, up 123 million pounds or almost 18 percent, and Switzerland, where the increase of 51 million pounds meant an increase of 33 percent in this category in one year. On the other hand, declines were registered in New Zealand, where utilization dropped 96 million pounds, almost 37 percent, Australia, down 61 million pounds or about 13 percent and Ireland, down 51 million pounds or about 12 percent.

Milk going to livestock, above prewar levels in 1953, again increased, although still taking the same proportions, 7.9 percent, as in 1953. Only one country, Canada, showed a decreased use and in that country it declined 15 million pounds, a drop of about 2.5 percent in the face of a 2.8 percent gain in cow numbers.

This is one of a series of regularly scheduled reports on world agricultural production approved by the Foreign Agricultural Service Committee on Foreign crops and Livestock Statistics. It is based in part upon reports of Agricultural Attaches and other U. S. representatives abroad.

Erratum.

N.B. Footnote 7/ was inadvertently omitted from Italy for 1953-1954

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FOREIGN AGRICULTURE CIRCULAR

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREIGN AGRICULTURAL SERVICE
WASHINGTON, D.C.

FD 3-55 April 18, 1955

MARKETING DAIRY PRODUCTS AS GHEE AND RECOMBINED MILK IN THE NEAR AND MIDDLE EAST AND SECTIONS OF EUROPE

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JUN 28 1955
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L. H. Burgwald 1/ 2/

INTRODUCTION

A Foreign Agricultural Service survey was made recently in the Far East, the Mediterranean area and Europe to obtain certain specific information regarding the marketing of United States dairy products in those parts of the world.

In Japan the purpose of the survey was to observe recombining milk operations. In India and Pakistan, the objective was to determine recombining possibilities, and the manufacturing procedures, composition and quality requirements of the types of ghee acceptable to consumers there.

In Egypt there was a study of the manufacturing requirements for samna, as ghee is known in that country. The feasibility of recombining operations was investigated in Italy, and the butter market situation in the United Kingdom.

In each of the areas visited, except the United Kingdom, there is a large potential market for recombined milk, but before an effective demand can be created, pioneering, promotional and educational work will be necessary. The people must appreciate the nutritional value of fluid milk and develop a liking for it. Lack of refrigeration and transportation in some regions also are factors that must be considered.

1/ Consultant, Foreign Marketing Branch, Livestock and Livestock Products Division, Foreign Agricultural Service, U. S. Department of Agriculture.

2/ The author wishes to acknowledge the valuable assistance and information supplied by the following: Mr. Joseph Dodson - Asst. Agr. Attache (Tokyo), Dr. Clifford C. Taylor - Agr. Counselor (New Delhi), Mr. Tilmer O. Engebretson - Agr. Attache (New Delhi), Mr. Eric B. Shearer - Agr. Officer (Bombay), Mr. Ingraham - Counselor General's Office in Madras, Mr. Robert Winfree - American Consul (Calcutta), Mr. Donald MacDonald - Agr. Attache (Karachi), Mr. William Wintermeyer (Cairo), Mr. W. Raymond Ogg - Agr. Attache (Rome), Mr. Herbert Ferguson - Asst. Agr. Attache (Rome), Dr. Eric Englund - Agr. Attache (London), and Mr. Robert L. Gastineau - Asst. Agr. Attache (London)

There are definite possibilities for the United States dairy industry to develop a market for a good-quality, pure cow-ghee in India and Pakistan.

Although more than 50 percent of the milk produced in these countries is utilized for making ghee, there is a ghee shortage from April until October each year.

The United States can supply this ghee without difficulty. Samples taken to India and Pakistan were acceptable to members of the Ghee Merchants Association, Government officials, and official laboratory testers in those countries.

In Egypt there is also a potential market, but it will probably take longer to develop it than in India and Pakistan.

INDIA

Ghee Situation

There is definitely a market for ghee in India, especially during the season of short supply -- April through October.

In the Calcutta area, very little ghee is made and a good potential market exists at all seasons. Most of the ghee consumed in this area is shipped from other areas of India and the wholesale prices vary from 51 to approximately 55 cents per pound.

The 55-cent price prevails from April to October. Calcutta and Madras are markets for cow ghee while Bombay is chiefly a market for buffalo ghee. Wholesale prices for ghee in Bombay vary from about 46 cents to about 53½ cents a pound. The higher price prevails during the summer months. In Khurja, one of the large ghee blending markets, the wholesale price varies from about 43 cents to 51 cents a pound. These prices prevailed in 1954.

Bombay desires a low-heat ghee whereas Calcutta and Madras desire a high-heat ghee. By low-heat, is meant a ghee that is cooked at a temperature of approximately 105°C. (221°F.) and never over 110°C. (230°F.); while the high-heat ghee is cooked at a temperature between 110°C. (230°F.) and 120°C. (248°F.) - usually closer to 120°C. (248°F.).

Observations of the manufacture of ghee at Indian ghee factories indicated that a uniform cooking temperature is not used. The ghee maker determines by appearance rather than by a thermometer when the ghee has been cooked sufficiently. Temperatures taken with a thermometer at the time the ghee maker decided it had been cooked sufficiently varied from 228°F. to 247°F. on different lots at one plant. At another plant, the temperature used was 110°C. (232°F.).

At most of the plants, the ghee is made from butter churned from ripened cream. The butter is removed from the churn, without washing, to a ghee-making kettle which holds approximately 60 pounds. It is heated slowly over an open fire until melted and cooked with continuous stirring until the moisture is boiled off. It is then usually cooked for another 6 to 10 minutes depending upon whether it is intended for the Bombay or Calcutta market.

United States Samples

Samples of United States made ghee -- some high-heat and some low-heat were exhibited to the ghee merchants in various areas. In Bombay, these merchants definitely preferred the low-heat ghee. The high-heat samples were criticized as being over-cooked. In Calcutta, the ghee merchants definitely preferred the high-heat ghee and indicated their dislike for the other as being "raw" ghee.

The chief objection to the United States samples when they were first considered was that they lacked "grain." Grain, however, developed in these samples within 21 days. Grain is developed by slow cooling. Apparently, the high temperatures of India had re-melted the samples and a "grain" developed as a result of slow cooling. Indications were that we could definitely produce a ghee in the United States from cow's milk which would be acceptable in India.

In Bombay, the average daily sale of ghee ranges from about 40,000 to 50,000 pounds and during the summer months, the demand may increase to 60,000 pounds. In Calcutta, consumption of ghee is approximately 40,000 pounds daily. In Madras, the daily sale is only about 5,000 pounds. It was indicated though that 90% of the population here made their own ghee from butter. It is thought, however, that the United States could obtain most of this trade by making available a pure cow ghee free from adulteration.

Factory-Made Ghee

As previously mentioned, most of the factory ghee in India is made from freshly-churned butter. However, at the Government farm near Calcutta, ghee was made directly from cultured cream, in a steam-jacketed kettle. The making of ghee directly from cultured cream is a much longer process than when it is made from butter. When ghee is made from butter, the cooking process takes from 30 to not over 45 minutes. When made from cream, approximately 4½ to 5 hours are required. This was the only commercial plant where a steam-jacketed kettle was used. One other ghee factory had a steam-jacketed kettle but were no longer using it because it was believed a better grained ghee was obtained by cooking over an open fire.

The dairy research institute at Bangalore had developed and were using a steam-jacketed kettle for cooking ghee. Ghee made at the institute had plenty of grain. It was stated that cooking temperatures close to 120°C. (248°F.) gave better keeping qualities to the ghee than temperatures of only 105-110°C (221-230°F.). It was also indicated that cow ghee had somewhat higher vitamin A content than buffalo ghee.

When the ghee is sufficiently cooked either over an open fire or in a steam-jacketed kettle, the heat is removed and the product is permitted to set undisturbed for 15 to 20 minutes. The clear ghee is removed either by dipping when prepared over an open fire, or by draining off through a valve to within two inches of the bottom of the steam-jacketed kettle. It is then filtered through unbleached muslin cloth and filled into the final container. Slow cooling of the ghee in the final container is necessary to develop grain. Sometimes cans are filled in several stages allowing them to cool partially between each addition. In this way, it is believed a better grain is obtained.

Farm-Made Ghee

Most of the ghee is made on farms, in small lots, and is sent to blending factories in the various ghee centers. There are several blending factories in Khurja, and one in Bombay. All 3 produce ghee carrying the official "Agmark" label. At blending factories, the ghee from various areas are blended together to obtain the type desired for a particular market.

Although some Indian ghee may have slight rancid and smoky flavors, these flavors are not desirable. Ghee with the rancid defect is rarely used for home consumption and sells at a discount. It is purchased primarily by the confectionery trade. The quality of ghee varies for different places and the price usually varies with the quality.

United States Trial Shipment

At a meeting with the Minister of Food and Agriculture just before leaving India, it was decided that the Indian Government would accept a trial shipment of 500 metric tons of ghee from the United States. Forty percent of this shipment would be in one seer (2.057 pounds) tins, 40 percent in $2\frac{1}{2}$ seer tins and 20 percent in 5-seer tins. Seventy-five percent of this shipment would be high-heat ghee for the Calcutta and Madras market and 25 percent would be low-heat ghee for the Bombay market. It was understood that it would be sold by the Indian Government to the ghee merchants by auction in small lots. It was also stressed that it should reach India prior to July so that it would be available during their season of short supply. During this period, in addition to having a definite demand for ghee, the United States would not be competing with, and thus would not disrupt, the Indian ghee market.

Milk Situation

India has areas where fluid milk is quite plentiful during certain seasons of the year, but there are many areas where there is a definite shortage. Limited refrigeration and transportation for producer milk are factors favorable to the installation of recombined milk plants. The consumption of fluid milk, however, is very low. This is due partially to the relatively high price and partially to the fact that the desire for milk as such is almost non-existent. Adults, as a rule, do not drink milk.

To create a market, it will, therefore, be necessary to educate the people regarding the food value of milk and to sell it at a price they can pay. Bombay with its Bombay Milk Scheme has the best and largest milk supply of any of the cities visited in India. The milk colony at Aarey produces about 16,800 gallons daily and 8,000 gallons is received from Anand. Most of this is sold as whole milk but some is "toned". As a result of "toning", approximately 29,000 gallons of milk is sold daily.

The price for whole milk (about 7 percent fat) is 14 annas per seer (approximately 18½¢ a quart) and the price of the "toned" milk (about 3 percent fat) is 6 annas per seer (approximately 8 cents a quart). Bombay, does not permit the use of either whole or toned milk in hotels or restaurants. About 5 tons of skim milk powder is sold daily by the Government to the hotel trade.

A scheme similar to the Bombay Scheme is being organized in Calcutta. By the end of 1955, it is expected that 4 of 26 units for housing dairy cattle will be completed at Haringhata farm and at the end of the 5 year period, the 26 units will be completed and about 28,000 animals will be housed. At present, they produce about 350 gallons of milk and buy about 2,000 gallons to supply the city. All buffalo milk is toned to 4 percent fat and sells at 11 annas per seer (approximately 15 cents per quart). Non-toned cow's milk is sold at 14 annas per seer or 18½¢ a quart. In addition to the milk from the government farm at Haringhata which is sold in Calcutta, there are 3 small pasteurizing plants. The largest pasteurizes and sells approximately 4,800 pounds of milk daily. It is sold at 9 annas a pound (approximately 12 cents a quart).

In Madras, there is a recombining plant that makes recombined "milk" from skim milk powder and vegetable fat. This plant is producing about 5,000 pounds of milk daily and during the summer months about 10,000 pounds daily. Only about 200 pint bottles were being filled, as most of the milk is sold in bulk. It is sold at 4½ annas per pint (approximately 6 cents), and in bulk at 7 annas a seer (approximately 9½ cents a quart). This indicates a good potential market for recombined milk in India. One individual in New Delhi, who attended Michigan State College, is interested in putting in a recombining plant. Capital and land are available but help in building and equipping the plant is needed. He will survey the potential market and then contact the Agricultural Counselor regarding a loan under Public Law 480.

Butter Oil

In New Delhi, it was learned that 6 million pounds of butter oil were being shipped to India for relief purposes: 2 million pounds to Bombay, 2 million pounds to Madras, and 2 million pounds to Calcutta. The bills of lading indicated that it was shipped in 400 pound drums.

PAKISTAN

Ghee Situation

The ghee situation in Pakistan is similar to that in India but the price is higher -- 74 to 78 cents per pound. High-heat ghee is preferred. Most of that sold in Karachi is from the Punjab area and is the ghee most desired in this city. A blending plant in Karachi packing ghee under the "Pak-mark" label heats the ghee to a temperature of not over 60°C., filters, and allows it to settle in the blending tanks for about 3 hours. It is then dipped off into cans. About 250,000 pounds are blended yearly. Another blending plant for only cow ghee is located in Dacca (East Pakistan).

East Pakistanians use mustard oil in addition to cow ghee for cooking.

In Pakistan, a can deposit is paid when ghee is purchased. The deposit is returned to the purchaser upon return of the can. A one-seer tin costs at wholesale 5 annas (approximately 10 cents); a $2\frac{1}{2}$-seer tin costs 8 annas (approximately 16 cents); and 5-seer tins cost 12 annas (approximately 24 cents). The retail price is 5 rupees, 2 annas per seer (approximately 77 cents per pound). A ghee store in Hyderabad listed a wholesale price for Punjab ghee of 170 rupees per maund (82 pounds - approximately 62 cents a pound). Sind ghee, a low quality raw Kutcha ghee, sells for approximately 160 rupees per maund. The East Bangal (Dacca) monthly survey of economic condition showed the wholesale price of cow ghee in East Pakistan for October 1954 to be 274 rupees per maund; for September, 266 rupees 4 annas per maund; while in October 1943, the price was 209 rupees 8 annas per maund.

Pakistan should be as good a market for United States ghee as India. Due to the fact that a Pakistanian rupee is worth slightly over 30 cents, while an Indian rupee is worth only 21 cents in United States currency, the price will be somewhat higher. United States butter oil has been sent to the Pakistanian Army. It was reported that it was acceptable, but ghee is preferred to butter oil.

Milk Situation

The Health Commissioner was interested in having recombined milk available for school children. He would welcome such a plant in Karachi. The Deputy Secretary of Agriculture also recognized the value of a recombined plant to provide milk for free distribution to schools and for refugees. The Secretary indicated he would prefer to have such a plant operated by a commercial firm rather than by the Pakistan Government. Interest is being shown by a United States firm in such a venture.

The Amson Dairy just outside of Karachi produces about 1,600 pounds of milk per day and buys 1,600 pounds from other producers. The pasteurizing plant is equipped with stainless steel equipment. The plant has facilities for handling about 4 times the present volume. A very efficient job of pasteurizing, cooling, and bottling of the milk is done. The milk is pasteurized at 153°F. for 30 minutes. It is sold for 10 annas per pint or one rupee per seer. One of the owners of the plant stated that he would be very happy to have a recombined milk plant in Karachi. He thought it would be beneficial to the dairy industry as there is not enough milk in Karachi.

Representatives of the United States Foreign Operations Administration and of the Church World Service appeared interested in the use of the Amson Dairy for reconstituting skim milk for relief purposes. One of the owners of the Amson Dairy was interested in this proposition. It would enable him to use his plant and equipment for a longer period each day. At present, it takes only 2 to 3 hours to process his milk supply.

Relief Situation

A meeting with a representative of the Foreign Operations Administration and representatives of the National Welfare Conference and the Church World Service indicated that 7 million pounds of butter oil were being sent to Pakistan from the United States. All of this oil was to be shipped prior to March 31, 1955. None of it had arrived at the time of the Foreign Agricultural Service survey. It was indicated that about one to one-and-one-half seers of the oil would be distributed to families about once a week. Local relief organizations, schools, welfare institutions and hospitals would also receive butter oil.

Powdered milk is distributed to families. As a rule, all powdered milk is distributed in fluid form wherever water is available for doing so. At present, it is difficult to get the relief stocks distributed in the country. Relief products are on the docks and in railroad cantonments because no funds are available for moving them.

EGYPT

Ghee (Samna) Situation

No ghee-manufacturing plants or blending stations were found in Cairo and only one in Alexandria. An importer in Alexandria, was interested in handling ghee or samna for the Egyptian trade. He liked the United States low-heat ghee samples best. He stated that in Egypt price is the big factor -- not quality. He said he would like to get in touch with United States firms making samna, powdered milk, and butter oil.

Milk Situation

This importer was also interested in starting recombining plants in Alexandria and Cairo, Egypt; in Saudi, Arabia; and in Athens, Greece.

A large pasteurizing plant was visited in Alexandria. At present, the plant is processing only 12,000 pounds of milk daily, but has the capacity to process 8 times this volume. Milk is received twice daily; and is pasteurized at 85°C. for 16 seconds by an A.P.V., HTST pasteurizer, having a capacity of 6,000 pounds per hour. A high pasteurization temperature is used, in lieu of an automatic flow diversion valve to assure adequate pasteurization. The plant has modern equipment. Ghee (samna) is made from fresh churned butter, cooked to 120°C. in a stainless steel steam-jacketed kettle. Included in the plant equipment is a Westphalia continuous butter maker that will make 600 kilos per hour, and a Swiss packaging and wrapping machine. Several types of cheese - a soft white cheese similar to neufchatel; a Greek cheese known as Kefalotery; and a cheese similar to Cheddar known as Kaciovallo -- are made.

In Alexandria, as elsewhere in Egypt, milk consumption is very low. Proper advertising and promotion are needed to increase consumption. At present, it is planned to build a large pasteurizing plant in Cairo. It was stated that this plant will be incorporated for 400,000 Egyptian pounds (approximately $1,200,000). Plans are being drawn for it to handle fluid milk, ice cream, butter, cheese, and spray dried milk. This plant will handle about 50 tons daily with producer milk delivered to the plant twice daily. The assumption is that the proposed pasteurizing plant will be able to handle this quantity of milk and sell it daily at the start. Hospitals consume about 10 tons of milk daily at present and they will double this amount when pasteurized milk becomes available. The milk will be sold for about 6 piasters (approximately 18 cents per quart). It is estimated that Cairo consumes 200 tons of milk daily.

There is a bill in the Egyptian legislature to require all milk to be pasteurized. Raw milk sells from 4 to 7 piasters per liter (approximately 12 to 21 cents per quart). The two largest milk companies in Cairo sell a total of about 10 tons of milk daily, the milk retails at 6 to 7 piasters per liter (approximately 18 to 21 cents a quart). One of these plants (Astra), processing between 8 and 10 thousand kilos per day, was visited.

The plant has a Silkeborg pasteurizer with a manual control. The milk is heated to only 72°C. for 6 seconds. However, there is no holding tube on the machine. The pasteurizer has a capacity of about 2,000 kilos per hour, (1 kilo = slightly over a quart). The milk is sold through company-owned retail stores, through about 20 additional shops, and by 20 agents using bicycles, and handling about 50 bottles each, per day.

Relief Situation

A large quantity of dairy products is coming into Egypt for relief purposes. The 3 relief organizations in Egypt distributing these products are CARE, NCWC (War Relief), and the CWS (Church World Service). Church World Service has received 60,000 pounds of dried milk, 49,000 pounds of butter oil, and 77,000 pounds of cheese. This material will be distributed mostly to about 5,000 Palestinean refugees in Egypt.

The NCWC has 740,000 pounds of milk powder, 660,000 pounds of cheese, 240,000 pounds of butter oil. This is to go to the non-refugee population of the Gazza strip through the NCWC. CARE this fiscal year has on order 39,000,000 pounds of dried milk, 22,000,000 pounds of butter oil and 31,000,000 pounds of cheese. Approximately two-thirds of this amount will go to the school lunch program involving approximately 2 million school children. The remainder will be distributed to hospitals and a small amount will go for old age relief.

ITALY

Dairy Situation

A visit to the Centrale Delatta (the only milk plant in Rome) indicated a volume of about 300,000 liters of milk per day. This supply comes from about 30 to 50 kilometers from the center of the city. Most of the milk is pasteurized in a Silkeborg pasteurizer at about 76°C. for about 2 seconds, but the process is manually controlled and no holding tubes are used. A new A.P.V., 10,000 liter per hour pasteurizer, (milk heated to 75°C. for 15 seconds) has recently been installed.

The plant operates 16 hours daily. During the winter when there is a shortage, milk is shipped from north Italy in tank trucks from a distance of about 600 kilometers. The milk is not standardized, and contains between 3.4 and 3.8 percent fat. The farmer receives 55 lira per liter (9 cents per quart) for milk which retails through stores at 84 lira per liter ($13\frac{1}{2}$ cents per quart). There is no home delivery.

The Minister of Agriculture was visited with reference to the possibility of establishing recombined milk plants in Italy. The Minister stated that Italian powder plants were not operating at capacity because there was no demand for powdered milk. There is a law prohibiting recombining by milk plants even if the milk is properly labeled. Plants are not permitted to standardize milk, so no powdered milk could be used for this purpose. It was also mentioned that the villages do not have proper facilities nor water for mixing or reconstituting powdered milk.

The Minister further stated that sterilized milk is a more satisfactory product than reconstituted as no water or refrigeration is required for sterilized milk. It was stated that southern Italy has a shortage of milk, but northern Italy is able to supply all the milk needed, and it would undoubtedly be supplied in the form of sterilized bottled milk.

A visit to Bari in southern Italy indicated that although from a nutritional standpoint there is a shortage of milk there, the consumption of milk, however, is less than the supply. In Bari, the milk plant was bottling only 18,000 liters daily for a city of approximately 300,000 population. There was a considerable surplus at this time and butter and several types of cheese were made. The farmer receives 56 lira per liter (approximately 9 cents a quart) while the milk retails for 93 lira per liter (approximately 15 cents a quart).

An ice cream plant (Algida) was visited in Rome. This company was started in 1947 and now produces about 300,000 gallons of ice cream yearly. Concentrated ice cream mix (obtained from M&R Dietetic Laboratories in the United States) was originally used. Now the company obtains its raw materials, fresh cream and condensed milk, and at times a small amount of skim milk powder (never more than 5 percent of the total products used) from northern Italy. Mostly novelties are made, but the demand for packaged and bulk ice cream is gradually increasing. Only about 5 percent of the ice cream volume is produced in the winter months. At this time, (March) they were operating only 2 days a month. Ice cream in Rome is still a summer product. The product compared very favorable with United States ice cream. It contains slightly more sugar, 17½ percent. Overrun on packaged bulk ice cream was about 80 percent while on the novelties it was between 85 and 90 percent. From 10 to 11 percent fat and about 11 percent serum solids were used.

Relief Situation

A large quantity of dairy products is going to Italy for relief purposes. Most of it to the NCWA. In 1954, this organization received about $8 to $10 million worth of dairy products -- about 10 million pounds of milk powder, 7 million pounds of butter, and 8 million pounds of cheese. About 800,000 children are fed in summer camps.

Various ways have been developed in which to utilize these products, particularly skim milk powder, so that objections to powdered milk are overcome. A large portion of the skim milk powder is made into a chocolate milk powder at a cost of about 3 cents per pound for the addition of sugar and cocoa. Chocolate milk fudge bars, a processed cheese bar from powdered milk, and a cheese sandwich using wafers made with powdered milk with a Cheddar cheese filler are made. About 50 percent of the milk powder received is made into these products.

Herbert Ferguson, the Assistant United States Agricultural Attache, put on a demonstration for Msgr. Landi using a waring blendor to reconstitute skim milk powder. This product was much smoother and had a better flavor than the product which they had been using. Msgr. Landi was very interested in obtaining some high speed mixers so that they could do a better job of reconstituting skim milk. Mr. Ferguson found that in reconstituting with a waring blendor the use of 10 percent skim powder instead of 9 percent gave a better-tasting product.

W. Raymond Ogg, the Agricultural Attache, is interested in putting on dairy demonstrations at some of the agricultural fairs in Italy. He asked if displays were available that could be used to depict the dairy industry such as a model spray drying or pasteurizing plant, etc. Animated displays would be preferred. He is planning a display of products that could be made from powdered milk and also to give out some samples of freshly made reconstituted milk to overcome the prejudice against this product.

Need to Create Demand

Information obtained in Italy indicates that something should be done to create a greater demand for dairy products. If and when this is done, there will be a market for dairy products in Italy. They have a shortage of butter in November, which the United States may be able to supply.

UNITED KINGDOM

In an interview with Dr. Eric Englund, Agricultural Attache, American Embassy, regarding the butter situation, it was determined that there is not much chance that the United States will enter the British butter market. United Dairies in London and the Dairy Research Institute at Reading were visited.

JAPAN

Recombined Milk

The Blue Shield Milk Plant in Yokohama was visited. This is probably one of the largest recombining milk operations in the world.

Between 15,000 and 17,000 gallons of recombined milk were bottled daily and 3,500 to 5,000 gallons of ice cream were manufactured daily. The milk plant operates about 20 hours daily and the ice cream plant operates about 16 hours daily. The plant is modern and the product compares favorably with fresh milk. The butter oil used in recombining is shipped and stored under refrigeration. The ice cream compares very favorably with that produced in the States. Only United States butter oil and nonfat dry milk solids are used in this plant. This plant has a complete water treatment system so that the water used for recombining will be uniform.

There is a possibility that the Japanese Dairy Industry will supplement their milk supply with a recombined product.

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WORLD OUTPUT OF DAIRY PRODUCTS, FOURTH QUARTER AND ANNUAL, 1954.

Fourth Quarter:

Over-all factory production of dairy products decreased in the fourth quarter of 1954, compared with the same quarter of 1953. Butter output showed practically no change from the earlier year, but cheese, canned milk and dried milk were below the 1953 level.

Conditions in Australia in the final quarter of 1954 were excellent for dairy production. Exceptionally cold weather in most parts of Western Europe, following the poor 1954 harvest, kept milk production below last year's level. In Canada, weather conditions were unusually variable, and milk production showed only a slight increase. Mild weather in the United States resulted in somewhat higher milk production in the quarter.

Butter production in factories in the October-December quarter showed practically no change from the corresponding quarter of 1953. In Australia, butter production rose substantially over the earlier year, not only because of the higher output of milk in this quarter, but also because of the increased diversion of milk supplies from cheese to butter manufacture. A change in the milk utilization pattern accounted for the higher butter output in New Zealand.

Production in Belgium in the fourth quarter of 1954 exceeded that of the earlier year. In Norway, it was maintained at approximately the 1953 level. The increased use of milk for other products in the Netherlands was achieved at the expense of butter. In Ireland, milk production in the fourth quarter was affected by unusually wet weather and some shortage of feed, and butter production in this period declined sharply. Output in Western Germany fell just below the 1953 level. Production in Denmark, Finland, Sweden, Switzerland and the United Kingdom also was down in the final quarter of 1954.

Output of factory butter in Canada showed practically no change from a year ago, but in the United States, butter production was down throughout the quarter.

Cheese output declined 4 percent in the fourth quarter of 1954, compared with the same period a year earlier. A considerable increase was reported in New Zealand in this quarter, again reflecting the shift in milk utilization. In Australia, a considerable amount of milk was diverted from cheese to butter production, due largely to a disparity in returns for butter and cheese on export markets.

A summary of this information appeared in Foreign Crops and Markets, issue of March 28, 1955.

Increased cheese manufacture occurred in the Netherlands in the last quarter of 1954, as a result of an increased market demand, particularly for Gouda cheese. Production also was up in Norway and Sweden during the October-December period of 1954, but it was down in Denmark, Switzerland and the United Kingdom.

Throughout the quarter, output in Canada continued above the 1953 level, while in the United States, it continued to decline.

Canned milk production in the final quarter of 1954 was 3 percent below comparable 1953. Considerably less canned milk was manufactured in Australia than a year earlier. In the Netherlands, more milk was available for condensing than a year ago and output was up. In both Canada and the United States, the only other countries reporting, over-all canned milk production was lower than in the preceding year.

Dried milk output in the fourth quarter of 1954 dropped 6 percent below the 1953 level. According to the latest report from Australia, production there is estimated as heavier than a year ago, accounted for by the increase in the output of nonfat dry milk solids. In the Netherlands, production of both types of dried milk was somewhat higher during the last quarter of 1954 than in the previous year. Output declined in both Canada and the United States, both dried whole milk and nonfat dry milk solids being manufactured in smaller quantities than in the same period of 1953.

Annual:

The year 1954 as a whole was favorable for the production of dairy products, over-all output of which was above that of 1953. An increase in cow numbers in almost all of the major producing countries, and in some, higher yields, resulted in higher milk production than in the preceding year, much of which was available for manufacturing.

Conditions for dairy production in Australia were generally excellent, and milk production for the year was well above 1953. In New Zealand, although some increase in dairy cow numbers occurred, production was hampered by bad weather.

Milk production in Denmark showed only a slight gain over the earlier year. Cow numbers were up, but unfavorable conditions in the early spring and again towards the end of the year were reflected in a lower average yield per cow. In the Netherlands, notwithstanding an appreciable increase in the size of the dairy herd, milk production was only moderately heavier than in the preceding year, being hampered by dry, cold weather in the early spring and by excessive rain in the fall months which reduced yields. Very favorable conditions in Western Germany, particularly in the early part of the year, resulted in a marked improvement in yield per cow and in total milk production.

In Belgium, milk production in 1954 set a record. The increase was due not only to the larger number of milk cows, but to good pastures throughout most of the year. Also, culling of the herds, improvement of stock and better feeding practices were factors contributing to the higher output. Cows in Finland were slightly above a year ago, and milk production there in 1954 also set a record. Lower milk production was reported in Sweden, due to the relatively low price of milk and the relatively high profitability of pork production. In Norway, milk production is estimated to be just under that of 1953.

An increase in milk production in Switzerland was attributed largely to the continued improvement of the Swiss herd because of the elimination of T-B reacting animals and better care in general. In France, milk cow numbers were up and the feed situation was excellent and milk production in 1954 reached an all-time high. Production in Italy is estimated as slightly below 1953, production per cow being down, due to a somewhat smaller forage crop.

Favorable weather conditions and an increase in cow numbers resulted in higher milk production in Ireland in 1954 than in the preceding year. In the United Kingdom, milk output, based on a slightly larger dairy herd, rose to a record level.

With higher cow numbers and good pasture conditions, production in Canada in 1954 was in excess of that of 1953. The record milk production in the United States during the past year was attributed to several factors: the decline in prices for beef cattle which made the beef enterprise a less favorable one to dairying than previously; the improvement in the quality of roughage feeds; the increased productive capacity of milk cows.

Butter production in 1954 rose 4 percent over 1953. In Australia, output of butter was the highest in some years, but in New Zealand, a sharp decline occurred.

Increased output in Denmark was attributed to both the larger milk production and to the shift in milk utilization from cheese and milk for liquid consumption to butter production. In Western Germany, the bulk of the increase in milk supplies was utilized in the manufacture of butter. Higher milk production in Belgium, and, in turn, higher deliveries to plants, resulted in a rise in butter output.

In France, butter production absorbed the bulk of the year's increase in total milk production. Butter production also increased in Finland and Switzerland. Slightly less milk was processed into butter in the Netherlands in 1954 than in 1953. Output also was down in Norway and Sweden.

Sales for fluid consumption in the United Kingdom showed virtually no change. The surplus milk was utilized entirely in manufacture, mostly of butter, which reached its highest postwar level and exceeded the prewar average. In Ireland, more milk was diverted to butter from chocolate crumb and other manufactured dairy products, and for the first time since the war, butter production exceeded 1938.

The higher milk production in both Canada and the United States was reflected in increased butter output in those countries.

Cheese production in factories showed a gain of approximately 2 percent in 1954, compared with 1953. Both Australia and New Zealand reported gains in output of cheese. In the Netherlands, a slightly better market for full fat cheese during the year resulted in a larger output. France, Norway and Sweden also reported cheese production above the 1953 level. Output in Italy was approximately the same as a year earlier.

In Denmark, decreased cheese production resulted from the diversion of milk from cheese to butter manufacture. Cheese output in Switzerland declined sharply below 1953 because of large stocks at the beginning of 1954. Production in the United Kingdom dropped below the record level of 1953, although it remained much heavier than in any previous year. In both Canada and the United States, cheese output in 1954 was in excess of 1953, due largely to the availability of larger supplies of manufacturing milk.

Production of canned milk (condensed and evaporated) in 1954 declined slightly below the quantity manufactured in 1953. Output in the Netherlands was maintained at approximately the level of the previous year. Increased output of evaporated milk kept over-all canned milk production in Canada above that of 1953. In the United States, total canned milk production was down, accounted for by the smaller output of evaporated milk, production of which was the lowest since 1940.

Dried milk production in 1954 rose 4 percent over calendar 1953. While output of total dried milk (both dried whole and dried skim) in Australia is estimated as only slightly above a year ago, that of dried skim milk ran well ahead of 1953. Heavier production of dried skim milk also accounted for the increase in overall dried milk output in the Netherlands. Production of both types of dried milk in Canada in 1954 showed practically no change from a year ago. In the United States, total output of dried milk increased. Dried whole milk production dropped sharply below the 1953 level, but nonfat dry milk solids production was up 6 percent over 1953, and was the highest in twenty years.

Current Conditions Abroad:

Sydney: A fair amount of rain was received in practically all dairying districts of Australia in early 1955, and so the seasonal outlook is favorable at present.

Wellington: The production outlook for 1955 in New Zealand is expected to be the same as in 1954, except for cheese which is expected to decrease. Cheese factories in some districts are planning to reduce the current season's output by switching over to the manufacture of lactic casein.

Copenhagen: Domestic supplies of feed in Denmark are significantly smaller than a year ago and prices of oil-cakes are increasing. It will undoubtedly be necessary for farmers to cull their herds in order that the scarcer quantities of feed can be utilized more efficiently.

Bern: Milk production in Switzerland in 1955 is expected to be somewhat below 1954. Less butter will be produced, but the production of cheese will increase.

London: Wintry weather throughout the United Kingdom in February reduced milk production below last year's level.

By Regina M. Murray. Based in part upon reports of Agricultural Attaches and other U.S. representatives abroad.

FACTORY DAIRY PRODUCTS: Output in principal producing and exporting countries,
4tb Quarter (calendar) 1954, with comparisons

Country and Product	Average 1934-38	Average 1946-50	Total 1953	Total 1954	1953 4tb Quarter	1954				Fourth Quarter 1954/53
						1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	Percent
BUTTER										
Canada	1/ 254,774	277,868	2/ 302,783	312,854	2/ 55,267	2/ 35,425	2/ 104,228	2/ 117,827	55,374	100
United States	1,673,328	1,301,830	2/ 1,411,814	1,449,180	2/ 291,954	2/ 378,575	2/ 467,330	2/ 331,640	271,635	93
Belgium	46,179	55,353	2/3/ 90,583	3/ 97,779	19,056	2/ 16,938	2/ 29,209	31,612	20,020	105
Denmark	400,660	318,697	2/ 380,734	397,710	84,656	87,743	120,150	2/ 107,527	82,290	97
Finland	61,287	4/ 61,215	106,396	112,496	22,778	23,424	34,731	33,206	21,135	93
France 5/	529,000	390,471	6/ 606,000	6/ 650,000	-	-	-	-	-	-
Germany, Western	7/8/ 560,000	4/ 492,188	634,728	673,775	145,283	148,616	194,492	186,663	144,004	99
Ireland	89,400	68,648	78,774	88,005	15,116	4,886	30,707	38,042	14,370	95
Netherlands	201,000	155,620	182,984	6/ 179,288	2/ 50,946	26,409	52,714	57,719	6/ 42,446	83
Norway	24,930	20,049	2/ 27,908	22,884	2,830	4,153	9,002	6,887	2,842	100
Sweden	152,769	216,442	215,814	204,094	42,368	41,307	60,942	62,949	38,896	92
Switzerland 5/	57,760	36,949	9/ 52,469	9/ 65,036	2/ 10,642	15,488	20,209	16,909	10,148	95
United Kingdom	44,200	23,529	2/ 34,272	51,520	8,736	11,021	21,146	13,709	5,644	65
Argentina	65,742	100,657	127,869	-	-	-	-	-	-	-
Union of So.Africa	10/ 27,725	44,845	68,151	-	19,178	2/ 23,411	2/ 16,447	14,423	-	-
Australia	8/ 415,250	354,371	350,186	397,777	124,933	107,372	57,985	76,474	155,946	125
New Zealand - Total	8/ 366,912	346,095	2/ 430,682	407,501	2/ 167,326	111,104	37,878	80,954	177,565	106
Export Gradings	11/ 322,796	301,826	363,708	330,511	151,571	91,143	23,636	2/ 61,994	153,738	101
CHEESE										
Canada	1/ 119,924	114,329	2/ 76,744	84,436	2/ 13,608	2/ 7,040	2/ 27,968	2/ 34,798	14,630	108
United States	643,234	1,156,005	2/ 1,344,836	1,353,500	2/ 272,298	2/ 322,000	2/ 445,340	2/ 328,570	257,590	95
Denmark	68,820	123,634	2/ 191,580	178,793	33,289	34,172	59,524	2/ 52,031	33,066	99
France 12/	6/ 584,000	13/ 424,070	6/ 640,000	6/ 730,000	-	-	-	-	-	-
Italy 12/	523,513	491,326	6/ 721,000	6/ 721,000	-	-	-	-	-	-
Netherlands	6/ 200,000	176,926	2/ 291,663	6/ 306,844	2/ 61,451	44,004	94,514	100,362	6/ 67,964	111
Norway 14/	39,067	35,564	61,298	68,188	7,851	12,930	23,665	19,465	12,128	154
Sweden	76,059	115,005	2/ 119,714	121,845	18,862	23,400	41,469	37,539	19,437	103
Switzerland 14/	111,729	107,232	2/9/ 130,954	121,253	2/ 23,294	16,034	32,935	40,615	22,308	96
United Kingdom 5/	109,000	69,888	2/ 196,896	182,672	40,813	53,178	64,333	2/ 52,685	12,476	31
Argentina	67,873	203,830	242,506	-	-	-	-	-	-	-
Union of So. Africa	10/ 10,195	17,967	2/ 24,427	-	2/ 7,719	2/ 9,066	2/ 5,771	6,264	-	-
Australia	8/ 48,400	98,396	106,707	107,229	47,956	26,437	11,874	25,948	42,970	90
New Zealand - Total	8/ 210,911	216,842	2/ 239,971	246,198	2/ 100,621	71,456	22,938	39,558	112,246	112
Export Gradings	11/ 204,110	205,962	2/ 231,912	228,300	96,360	74,675	30,296	2/ 23,347	99,982	104
CANNED MILK										
Canada 15/	1/ 104,335	266,532	305,297	308,493	54,957	2/ 48,864	2/ 110,310	2/ 95,518	53,801	98
United States 16/	1,970,189	3,170,576	2,595,215	2,564,210	480,025	522,225	872,770	698,950	470,265	98
Cuba	17/ 32,564	36,655	63,798	-	15,876	7,686	11,340	-	-	-
Denmark	40,785	58,701	81,850	-	-	-	-	-	-	-
France	18/ 28,953	17/ 57,984	-	-	-	-	-	-	-	-
Netherlands	309,952	181,222	2/ 506,033	6/ 506,084	2/ 150,326	86,258	133,211	132,364	6/154,251	103
Switzerland	14,198	13,031	-	-	-	-	-	-	-	-
United Kingdom	378,560	219,914	2/ 309,344	-	20,967	15,412	122,752	46,234	-	-
Argentina	19/ 3,159	17/ 11,914	-	-	-	-	-	-	-	-
Australia	8/ 41,894	132,745	2/ 136,821	112,652	2/ 60,644	31,558	14,988	22,301	43,805	72
New Zealand	17/ 11,273	-	-	-	-	-	-	-	-	-
DRIED MILK 20/										
Canada	1/ 26,079	70,876	2/ 99,928	100,259	2/ 18,693	14,703	2/ 34,908	2/ 33,887	16,761	90
United States	17/ 203,555	913,436	1,317,347	1,379,025	256,734	366,220	492,335	284,230	236,240	92
Belgium	5,500	6,607	2/ 34,921	34,513	4,745	2/ 4,766	2/ 14,046	11,821	3,880	82
Denmark	2,205	16,866	21,102	-	-	-	-	-	-	-
France	18/ 7,685	17/ 3,308	-	-	-	-	-	-	-	-
Netherlands	56,438	54,468	2/ 129,707	6/ 137,293	2/ 23,866	9,099	49,041	54,552	6/ 24,601	103
Sweden	1,351	24,566	25,496	-	3,693	4,071	2/ 9,665	8,503	-	-
Switzerland	7,187	10,847	-	-	-	-	-	-	-	-
United Kingdom	43,098	73,848	2/ 95,424	-	17,382	22,848	48,832	2/ 24,818	-	-
Argentina	19/ 3,977	17/ 14,070	-	-	-	-	-	-	-	-
Australia	8/ 16,971	54,235	2/ 84,213	85,425	2/ 34,681	23,648	8,637	17,109	36,031	104
New Zealand	21/ 17,429	-	-	-	-	-	-	-	-	-

1/ Average 1935-39. 2/ Revised. 3/ Total production in 1953 is estimated at 192,902,000 pounds, and in 1954 at 196,292,000 pounds. 4/ Average 1948-50. 5/ Total production. 6/ Estimated. 7/ Average 1935-38. 8/ Production year ending June 30. 9/ Annual production figures more complete than monthly figures used in quarterly data. 10/ Production year ending August 31. 11/ Marketing year ending July 31. 12/ Total cheese, and includes cheese made from the milk of sheep and goats. 13/ For 1948. 14/ Total cheese, and includes cheese made from the milk of goats. 15/ Both bulk and case goods. 16/ Evaporated whole and condensed whole case goods only. (Estimates of production of bulk types discontinued). 17/ Less than a 5-year average. 18/ For 1937. 19/ For 1939. 20/ Total dried whole milk and dried skim milk for human consumption. 21/ For 1938.

Foreign Agricultural Service. Prepared or estimated from official statistics, reports of Agricultural Attaches and other U.S. Representatives abroad and other information. - April 8, 1955.

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MARKETING OF DAIRY PRODUCTS AS RECOMBINED MILK IN THE CARIBBEAN AND CENTRAL AMERICAN AREAS

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INTRODUCTION

There is a potential long-range market abroad for United States nonfat dry milk solids and butter oil (anhydrous milk fat) for use in the production of recombined milk. There are extensive possibilities of developing this market in view of the need for recombined milk to supplement milk supplies in periods of short production in certain world areas, and to provide a permanent milk supply in others.

Recombined milk made from high quality ingredients and prepared properly is as healthful, nutritious, and palatable as the natural milk supply of any area.

A study of the Caribbean and Central American countries has shown that the per-capita supply of milk for those areas is below that usually accepted as the quantity necessary for a balanced, nutritious diet. However, the apparent supply is not always indicative of a potential increased consumption if additional milk is available. In some areas, the first step for increased consumption would necessarily be an educational program to develop a liking for milk and an understanding of its nutritive value.

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The Dominican Republic, Haiti, El Salvador, Honduras, and Nicaragua, were visited to determine the feasibility of recombining operations. Cuba was also visited to ascertain marketing conditions.

DOMINICAN REPUBLIC

Representatives of the Dominican Republic have shown interest in supplementing the normal milk supply during the season of short production with recombined milk. The Foreign Agricultural Service, United States Department of Agriculture was asked to send a representative to demonstrate recombining milk on a plant-basis in Ciudad Trujillo.

The pasteurizing plant in Ciudad Trujillo has a capacity of 30,000 bottles (725-gram bottle - approximately three-fourths of a quart)of pasteurized milk a day. In the near future, a new plant with a capacity of 60,000 bottles (660-gram bottle - approximately two-thirds of a quart) will be in operation. The daily consumption of milk in Ciudad Trujillo, with a population of 180,000 to 200,000 is estimated to be between 70,000 to 100,000 bottle-equivalents (725-gram bottle). When the new plant is in operation, a law prohibiting the sale of raw milk will be enforced. The new plant will then be the sole milk supply for the city. It is anticipated that two 8-hour shifts will be necessary to supply the total needs. The retail price of milk is 14 cents a bottle.

During the season of short supply, the plant does not have sufficient milk to maintain a bottling operation of 30,000 units. Although the new plant will be the only receiver of producer milk, it will also be short during the season of short supply. Some of the present sellers of raw milk will seek other markets, some will discontinue producing, and long uneconomical hauls made by the present plant will be discontinued. In January, the short season had begun and there was a 2,000-bottle deficit which was expected to increase to 8,000 bottles.

After a normal day's operation of the plant, the production of recombined milk with United States nonfat dry milk solids and United States butter oil was demonstrated. The morning after the demonstration, 1,282 bottles of the recombined milk were sent to the regular customers of the dairy. They were not told that the milk was different from their normal supply. No comments were received by the dairy. Refrigerating for 24 to 48 hours improved the flavor of the recombined milk and the "cooked" flavor completely disappeared. The high acceptability of the product caused the management to decide to start supplementing the normal supply with recombined milk as soon as possible. The initial production will be 2,000 bottles a day.

To be competitive, the nonfat dry milk solids for the recombining operation must be obtained at the United States Department of Agriculture's export price and the butter oil must be obtained under the program making Department butter available for export shipment as butter oil for recombining purposes. These prices apply only to carload lots. On the basis of a daily requirement of 2,000 bottles, a carload represents a 6-month's supply of basic ingredients. To supply such a need, the United States exporter will have to procure in carlots and fill several small orders or work out arrangements with the purchaser to share storage costs with shipment of supplies as needed. Storage for more than 60 days of carlots purchased from the U. S. Department of Agriculture by the exporter must be authorized by the Commodity Credit Corporation.

When the new plant in Ciudad Trujillo is in operation, the old plant will be moved to Santiago, the second largest city in the Dominican Republic. Santiago does not have a pasteurized milk supply at present. Interest was indicated in establishing small recombining operations throughout the Dominican Republic to supply school children with milk as, at present, insufficient milk is available for this purpose. Furthermore, with the exception of the Ciudad Trujillo area, raw milk is used for this purpose.

Embassy reports, and observation of prices in stores showed that domestically produced butter sold for 90 cents to $1.00 a pound; 14-1/2 oz. cans of imported evaporated milk for 25 cents to 30 cents per can; imported dry milk in 5-pound cans for $5.00 to $5.25 per can, 2-1/2 pound cans for $2.75 per can, 1-pound cans for 95 cents to $1.25 per can. There were 2 ice cream operations that sold soft ice cream or frozen custard from the freezer in cones for 5 cents, 10 cents and 15 cents each. Pints of ice cream were 45 cents. One manufacturer of ice cream bars sold them from pushcarts. This manufacturer used one 2-1/2 gallon freezer. The bars sold for 5 cents to 10 cents. Dry ice cream mix imported from the United States was used in these operations. The products were highly acceptable. The total volume of ice cream sold was small.

HAITI

The milk available per capita in Haiti is very low. To supplement the normal milk supply to Port au Prince with a population of approximately 150,000, there are 2 small recombining plants in operation. The maximum capacity of the 2 plants is approximately 1,300 quarts but actual production is approximately 900 quarts. In addition to the two recombining operations, there are 2 plants pasteurizing local milk, with a total production of approximately 1,100 quarts. In addition, the pasteurizing plant of the Agricultural Department on the outskirts of Port au Prince sends another 200 quarts for distribution in Port au Prince. These sources provide approximately 2,200 bottles of milk per day for the city's population. In addition, raw milk is sold in the city. The total milk available is estimated to range from a minimum of 3,000 quarts to a maximum of 6,500 quarts per day. The milk retails for 20 cents to 22 cents a quart.

To increase consumption to any appreciable degree, it will have to be sold at a much lower price.

One plant was using nonfat dry milk solids and butter oil from sources other than the United States, and vegetable oil from a United States firm for the production of recombined milk. A 3.4 percent milk was made using 50 percent vegetable oil and 50 percent butter oil. The nonfat and butter oil were received in small quantity shipments at prices competitive with or slightly below U. S. Department of Agriculture export prices. Improvement in procedures were recommended and demonstrated for producing recombined milk. The advisability of a nearby supply of high quality ingredients was explained. The owner agreed to contact United States firms to determine if arrangements could be made for small quantity shipments at U. S. Department of Agriculture export prices. The owner expressed the belief that a lower price would increase consumption greatly. He stated that he would make an effort to supply a quality product at a lower retail price.

The second plant producing recombined milk was using U. S. U. S. vegetable fat and nonfat dry milk solids from another source. The owner of this operation was not optimistic about the possibilities of increasing milk consumption in Port au Prince or Haiti in general.

Both plants were manufacturing ice cream. The products manufactured and sold were: 2-oz. water ice bars for 2 cents; 2-oz. 4 percent fat milk bars for 3 cents;3-oz. ice cream cups for 6 cents; 5-oz. ice cream cups for 10 cents; pints of ice cream for 25 cents; and quarts of ice cream for 50 cents. Approximately 4,000 of each of the bars was sold daily; the remaining products amounted to a weekly production of about 200 gallons (the output of both plants is included in these figures). Both plants were using vegetable fat and nonfat dry milk solids as the basic ingredients for their ice cream mixes. One plant was considering shifting to a prepared dry mix.

From Embassy reports, and observed prices in stores, United States butter was selling in Haiti from $1.10 to $1.20 a pound. Imported butter from other sources was as low as 90 cents a pound; United States margarine 45 cents to 50 cents a pound; 14-1/2 oz. cans of evaporated milk, United States, 19 cents to 20 cents a can, other sources 15 cents a can; dry milk $1.00 a pound; nonfat dry milk solids 49 cents to 50 cents a pound.

CUBA

In Cuba, the general market situation was observed with special reference to butter. Opinion differs in the Cuban dairy industry as to the desirability of importing United States butter. The desire of the Cuban government, as expressed to our Embassy officials, appears to be that United States butter should not be imported.

During the season of short supply, recombined milk could be used to maintain consumption at a higher level. However, due to difficulties in controlling the use of nonfat dry milk solids during flush production, the Cuban Government does not favor recombining operations. Two milk plants and one ice cream plant in the Havana area were visited and manufacturing operations and quality control methods observed.

Pasteurized homogenized milk is selling for 25 cents a quart. The United States is the principal supplier of evaporated milk for Cuba. A 14-½ oz. can retails for 21 cents. Cuba manufactures sweetened condensed milk which retails at 19 cents for a 14-oz. can.

EL SALVADOR

The principal city of El Salvador is the capital, San Salvador, with a population of approximately 160,000. There is one principal pasteurizing plant bottling 2,000 liters of milk a day to supply the city. This milk retails at approximately 30 cents a liter.

There is some question whether there is a deficit of milk during the short season. A discussion with members of the Government interested in dairying, (including a milk producer) showed the consensus to be that recombining could be introduced to maintain normal consumption, and not be detrimental to the development of the local dairy industry. United States Department of Agriculture export prices for nonfat dry milk solids and for butter to be shipped as butter oil for recombining purposes were discussed. Belief was expressed that such information, and all information on recombining, should be made available to all interested parties in El Salvador.

The principal dairy plant is using nonfat dry milk solids from sources other than the United States as a basic ingredient in the preparation of ice cream mix. The possibility of obtaining nonfat dry milk solids at the U. S. Department of Agriculture export price on a carlot basis was to be investigated by this company. Three-ounce cups of ice cream were selling for 6 cents with a sales volume of approximately 1,500. Water-ice bars were selling for 2 cents; ice-milk bars for 4 cents, and "Eskimo pies" for 10 cents. Pints, quarts, and gallons of ice cream are also sold but the total gallonage is not high.

An ice cream store selling soft ice cream was visited. Cones were selling for 10 cents and 20 cents; half-pints of ice cream for 32 cents; pints for 60 cents; and gallons for $4.80. The product was currently made from imported dry mix.

Domestically-produced butter was selling in half-pound prints for 52 cents to 56 cents; imported margarine for 80 cents a pound; and imported process cheese for 96 cents a pound. Information was obtained that imported dry milk from other than United States sources was selling at 56 cents a pound in 5-pound tins while that imported from the United States was much higher in price.

HONDURAS

The total milk production for Honduras does not provide an ample milk supply on the basis of United States nutritional standards. The capital, Tegucigalpa, with a population between 60,000 to 100,000 has one pasteurizing plant that pasteurizes 1,000 pounds of milk a day. It is distributed in quart bottles at 30 cents a quart. This plant also distributes 1,500 pounds of raw milk a day at 23 cents for one-fifth of a gallon.

There is also a pasteurizing plant in San Pedro Sula, the second largest city in Honduras. It was reported that there is a surplus of milk during the flush season in this area of the country. With improvement of roads and transportation facilities, it is believed that this surplus could be used to supplement the present supply available to Tegucigalpa.

It was the belief of all parties contacted that the introduction of recombined milk using United States nonfat dry milk solids and butter oil would be detrimental to the local dairy producers. At the present retail prices for milk, particularly pasteurized milk, it is indicated that consumption will not be increased greatly.

There was one principal manufacturer of ice cream in Tegucigalpa. At present, nonfat dry milk solids and dry ice cream mix are used. These ingredients are purchased in Europe and re-shipped by a New York exporter. The prices paid are slightly below United States export prices for small quantity shipments. However, they are above the U. S. Department of Agriculture carlot export price for nonfat dry milk solids. The company manufactures approximately 190 gallons of ice cream a day and sells it for 31 cents a quart. In addition, it is selling 5,000 bars for 10 cents each and ice cream cups selling for $7\frac{1}{2}$ cents were made. A highly acceptable product was manufactured and the plant and equipment were in good condition.

From Embassy reports, and from store prices, it was noted that butter sold from $1.00 to $1.25 a pound (in one store, an 8-oz. tin of Dutch butter was priced at $1.00); United States evaporated milk $14\text{-}\frac{1}{2}$ oz. can $37\frac{1}{2}$ cents, 6-oz. can 20 cents; sweetened condensed 14-oz. can 40 cents; margarine 75 cents a pound; dry milk 5-pound can $3.75 to $4.50, 1-lb. can $82\frac{1}{2}$ cents to $1.00; Danish gouda cheese $1.50 a pound.

NICARAGUA

In Managua, Nicaragua, there is a modern pasteurizing plant supplying 40,000 quarts a day, including 2,400 quarts of chocolate drink, to the city's population of approximately 100,000. The milk is distributed through 150 retail outlets, equipped with refrigerated display cases. The milk retails for approximately 17 cents a quart. Chocolate drink retails for between 6 and 7 cents a half pint and between 11 and 12 cents a pint.

It has been difficult for the plant to keep ahead of the demand. Managua's plant is proof that people will drink milk when given a good, safe supply at a price that is not prohibitive.

A very useful adjunct to the plant is a spray-drying unit acquired under a UNICEF program. This unit provides facilities for drying the surplus milk during the flush or wet season. The contract with UNICEF provides that the nonfat spray powder produced shall be utilized in the school feeding program. The cream is churned into a high-quality, sweet cream butter with a 2.2 to 2.5 percent salt content. The powder not needed in the school feeding program is used either in making chocolate drink or to standardize the normal milk supply, and thereby augment this supply.

However, with a continuing increase in consumption, and with the approach of the height of the dry or short season of supply, recombining of imported nonfat dry milk solids and butter oil will be started in the near future. The plant is negotiating for a United States supply of 10,000 pounds of butter oil and 50,000 pounds of nonfat dry milk solids per month. An initial order of 50,000 pounds of U. S. Grade A butter is being placed to supply the demand.

The Managua plant has a quality program for both the raw milk supply and the processing of the milk through the plant. The raw milk received is tested at least once every two weeks for acidity, fat, and sediment. Lactometer readings are also made. Milk with excessive acidity or sediment is rejected.

The plant sells to the producers 10-gallon milk cans, single service pad strainers, pads, milk pails, and cleaning materials practically at cost. The milk is checked for acidity and flavor before it leaves the storage tanks and again as it leaves the bottle fillers. Recording thermometers record the time and temperature of pasteurization and the phosphatase test is run to determine that the milk is adequately pasteurized. Equipment is available for bacterial determination on both the raw and the finished products. When these are introduced in the near future, a complete program insuring a high quality product to the consumer will be in effect. Plans have been approved for manufacturing ice cream and the purchase of ice cream equipment for this plant.

The Managua plant is a cooperative operated as the Compania Nacional de Productores de Leche S. A. This organization has approved and appropriated money for the construction of a plant to produce sterilized milk in Leon, the second largest city in Nicaragua. This plant will provide 4,000 gallons of milk daily for the city's population of 30,000. The lack of refrigeration necessitates a sterilizing operation instead of a pasteurizing operation. An over-all plant for development of the dairy industry provides for the organization of new cooperatives and the building of additional dairy plants in neighboring areas.

A small ice cream operation, Cesar A. Riguero and Co., Ltd. was visited. This plant will soon have a Manton-Gaulin homogenizer in operation. It will be the first homogenizer in operation in Nicaragua. The basic ingredients for the ice cream are a vegetable fat from the United States and nonfat dry milk solids from another source. This operation is not large enough to utilize nonfat dry milk solids on a carlot basis. The price paid for small quantity shipments of nonfat solids is lower than the United States export prices for small quantities but higher than United States Department of Agriculture export prices on a carlot basis.

The ice cream is acceptable but its quality should improve when the homogenizer is in operation. Dairy cleaners from the U. S. could be used to better advantage, and this subject was discussed with the management. However, the plant and equipment appeared to be in good condition. The ice cream retail prices were approximately: gallon - \$2.71; liter - 71 cents; 1/2 liter- 42 cents; containers - 16-oz. - 42 cents; 8-oz. - 22 cents; 3½ oz. - 10 cents.

Farms supplying the Managua plant were visited.

Butter was selling for approximately \$1.00 a pound; native cheese for approximately 86 cents a pound; 14-1/2 oz. cans of evaporated milk for between 42 cents and 43 cents a can; and 14-oz. cans of sweetened condensed milk for between 32 cents and 33 cents a can.

EMBASSY STAFFS - MARKET FOR RECOMBINING MILK

When recombined milk was explained to members of our Embassy Staffs and others of the American colony, they inquired if butter oil and nonfat dry milk solids could be made available in small quantities for their home use. The majority of the Embassy staff members in all the countries visited are using imported dry milks, and believe that a recombined product would more adequately meet their needs. Waring blenders are in common use and if small packages of the basic ingredients with added stabilizer in one of them, or accompanying the ingredients, could be made available, the average American overseas family could provide itself with a highly palatable, nutritious, safe, milk supply.

The families of United States citizens in these areas would make the best obtainable sales force for recombined milk. Their daily contacts would soon convince people of the countries in which they live of the value of such a product.

Due to the inadequate supply of butter and cheese in much of this area, members of the United States colony have to depend on foreign imports of these products. It appears that it would be advantageous to our dairy industry and a service to our Embassy personnel to have United States butter and cheese available to them.

U. S. DAIRY EQUIPMENT IN THE CARIBBEAN AND CENTRAL AMERICAN AREAS

Most of the dairy equipment in the Caribbean and Central American Areas visited was manufactured in the United States. It was the general consensus that the equipment gave excellent service. However, it was an almost universal complaint that technical assistance in the installation of the equipment and instructions for initial operation was unsatisfactory. If such assistance and instruction necessitates additional cost, this should be provided in the bids and the purchaser given an opportunity to obtain it.

In one instance, a company hired an equipment consultant from the United States at high cost to assist in a small equipment installation. In addition, it was necessary to hire an individual from another country, again at high cost, for instruction on operation of the equipment and in producing the recombined product. In another instance involving a large equipment installation, the operator stated that at the time of delivery incomplete instructions were sent and essential parts were missing. He stated further, that the poor service given in supplying the missing parts caused a delay in starting the operation.

I asked if he had requested that the initial bids include installation costs. He stated that they had not because they had assumed such costs would be included in the bid. If it is not economical for one company to provide technical assistance, it may be feasible for such service to be provided by joint cooperation among United States equipment suppliers.

SUMMARY

There is a market in the Caribbean area and in all of the Central American countries visited for United States nonfat dry milk solids and butter oil for recombining to supplement the normal milk supply during the season of short supply if U. S. Department of Agriculture carlot export prices can be obtained. However, in Honduras, the production of recombined milk is not looked upon with favor.

Most of these recombining operations must begin on a small volume basis. The potential volume, however, will require carlot shipments. Plans must, therefore, be worked out to provide the small initial shipments needed now in order that the United States will have these markets later when carlot shipments are required.

To do this, it may be necessary to fill several orders out of one carlot or to provide a 3-month's supply with the supplier sharing the storage cost of the remaining quantities until they are needed. Another possibility is to supply a small quantity of butter oil from a carlot of butter and export the remainder. An answer must be found to this problem if the United States is to have these markets. The families of United States citizens in the areas visited would make the best possible sales force for recombined milk. It would appear advantageous to the United States dairy industry if small quantities of nonfat dry milk solids and butter oil for recombining and United States butter and cheese could be made available to them.

Whenever equipment is shipped to these areas, technical assistance is needed in its installation and initial operation. Proper cleaning programs must also be outlined in detail. If such service is provided, United States equipment will continue to be ordered. If not, equipment from other countries will be purchased to fill the needs of the expanding dairy industries in these countries.

Where a quality product is produced and sold at a retail price that is not prohibitive the consumption will far exceed the possible local production. This means a continuing market for nonfat dry milk solids and butter oil for recombining and a potential market for equipment to establish initial small recombining operations that will probably be replaced by large installations in the not too distant future.